Recd
3/5/55

CITY OF MANCHESTER

REPORT

ON THE

HEALTH OF THE CITY OF MANCHESTER

FOR 1954

BY THE

MEDICAL OFFICER OF HEALTH

ry Blacklock & Co. Ltd., Bradshaw House, Alms Hill Road, Manchester, 8.

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Health Department,
Town Hall,
Manchester, 2.

23rd May, 1

My Lord Mayor, Aldermen and Members of the City Council,

I have pleasure in presenting my report on the health of the City for year 1954.

Tables of vital statistics for the year are shown on pages 18 to 30a.

Vital statistics

The main points of interest concerning the vital statistics for the year 1 in comparison with previous years and England and Wales are as follows

Population

The Registrar General estimates the civilian population for 1954 at 699 a decrease of 2,800 on 1953 and 4,082 on the census population for 1951

Marriages

The number of marriages registered during the year was 6,217 comp with 6,052 the previous year. The marriage rate was 17·79 as against 1

Births

Registered live births numbered 11,843 (6,135 males, 5,708 females) g a rate of 16·94 per thousand population compared with 17·41 in 19 decrease of 0·47. The rate for England and Wales was 15·2, a decrease o on the previous year.

Of the 11,843 births, 10,967 (5,657 males, 5,310 females) or 92·60 per were legitimate and 876 (478 males, 398 females) or 7·40 per cent. illegitimate. The percentage of illegitimate births in 1953 was 6·29 an inc of 1·11 in 1954. The ratio of illegitimate to legitimate was 1 to 13.

There were 389 still-births (186 males, 203 females) giving a rate of per thousand total births which is 3·56 higher than the rate for 1953, and highest rate since 1943. The ratio of registered " still " to registered " births was 1 to 30. The rate for England and Wales was 23·4 an increa 1·0.

The percentage of total births in institutions was 62·61.

Deaths

The number of deaths allocated to the City during the year was (4,412 males and 4,113 females), a ratio to the population of 1 in 82 or a rate per thousand of the population of 12·20 as compared with 12·31 for and an average of 12·79 for the previous five years. The rate for Englan Wales for 1954 was 11·3.

There were 188 deaths from respiratory tuberculosis, the lowest nu ever recorded, as against 198 in 1953. There was a slight increase in the c from other forms of tuberculosis, the number being 21 as against 18 in

There were 405 deaths from cancer of the lung and bronchus, an increase 8 on the previous year (66 males and 2 females). Deaths from other s of cancer decreased by 11, the total number of deaths from all forms g 1,568 as against 1,519 in 1953. Of the total number of deaths from all s of cancer, 48·8 per cent. were over 65 years of age, a decrease of 3·7 ; f the number of deaths from cancer of the lung and bronchus, 45·5 per cent. over 65 years of age, an increase of 7·5 per cent.

t mortality

Deaths of infants under one year of age registered during 1954 numbered This was a decrease of 24 on the figure for the previous year and gives a f 29·47 per thousand live births, 1·06 lower than for 1953. This is again west infant mortality rate recorded for the City. The rate for England Wales was 25·5.

he number of neo-natal deaths was 237, giving a rate of 20·01 per thousand irths as against 256 deaths and a rate of 20·87 in 1953. The lowest led neo-natal death rate for the City was 18·43 in 1949.

nal mortality

here were no deaths from puerperal and post abortive sepsis during 1954. umber of deaths from other maternal causes was 6, giving a rate of 0·49 ousand total births compared with 0·80 for the previous year. This is the maternal death rate ever recorded for the City. The rate for England ales was 0·69 a decrease from the previous year which was 0·76.

pal wards

e ward statistics for the year have been based on the wards as uted at the beginning of 1954, since it was not possible to use the new ructure for part of the year. The revised wards are being used for 1955.

iology

ria

case of diphtheria was notified during the year and there were no deaths is disease.

litis

rteen cases of poliomyelitis were notified during 1954 compared with ases in 1953. There were two deaths from the disease, one of which outside Manchester.

rge number of cases of measles was notified during the latter part of

Health Service

Health Committee has approved in principle the extension of types of provided by the Mental Health Service and schemes are being formu- n adult occupation centre providing training and sheltered employment mental defectives, and a day nursery for mental defectives who, f gross disability, are unable to attend occupation centres or benefit training that they provide.

Provision has been made for short-term care of mental defectives who co not be admitted on a temporary basis to a mental deficiency hospital, in Orch Dene Short-stay Home, Rainhill, near Liverpool. The approval of the Mini of Health has been sought to a proposal enabling the Council to investigate possibility of providing short-term accommodation and, if thought fit, establish and maintain short-stay homes for the temporary care of me defectives.

It is proposed to extend the Service in Manchester by the provision day centre and club to assist the rehabilitation of patients discharged fi mental hospitals. This has been approved in principle by the Health C mittee and the approval of the Minister of Health has been sought.

Distribution of national welfare foods

The responsibility for the distribution of national welfare foods was un taken by the Health Committee and City Council following the receipt circular from the Ministry of Health intimating that, with the agreement o associations of local authorities, it had been decided that when the local o of the Ministry of Food closed at or about the end of June, the distribution of welfare foods should be undertaken by local health autho as part of their duties under the National Health Service. The foods conce are national dried milk, orange juice, cod liver oil and Vitamin A and D ta

Health centres

Sites for three health centres have been chosen at Hall Lane, Bagu the proposed Civic Centre, Woodhouse Park; and Sledmoor Road, Nor Moor.

The centres will provide facilities for school health, dental and mate and child welfare services.

It is anticipated that a commencement will be made on the erection buildings during 1955–56.

Water supply

The need for the protection of the Longdendale gathering grounds contamination caused the Corporation to object to part of the desig Pennine Way and medical and other evidence in support of the objectio given at the public inquiry held by the Ministry of Housing and Government in July, 1954. The Minister accepted proposals made Corporation for an alternative route. The Waterworks Committee pr to undertake necessary works for the filtration of the water fror Longdendale source of supply.

Food supply

The Food and Drugs Amendment Act, 1954, was enacted during th and the operative date is awaited together with contemplated new Regu to provide together with the Act, for the more effective control of the conc in which food is manufactured, prepared and sold ; the prevention addition of injurious ingredients to food ; the substitution of perr legislation for the existing temporary emergency control of the labelli advertisement of food.

The Milk (Special Designations) (Specified Areas) (No. 3) Order, 1953, ich was made by the Minister of Food, came into operation on the 1st uary, 1954. This requires that all dairymen who retail milk within the ty and surrounding districts specified in the Order, must sell the milk under ecial designation, namely, pasteurized, sterilized or tuberculin tested. Whilst e operation of this Order does not affect Manchester to a very large extent, ce for many years practically the whole of the City's milk supply has been steurized or sterilized, it is of interest to note that the effect of the Order is to ure what Manchester endeavoured to obtain in 1933, under the provisions a Local Bill, which however, was rejected by a Town's Meeting.

oke abatement

The final report of the Government Committee on Air Pollution was blished in November, and in general its recommendations support nchester's policy to secure clean air.

The pollution of the atmosphere by gases released or escaped from ustrial sources has caused many complaints particularly in the Miles Platting Clayton areas. This problem is being pursued by the Health Department consultation with H.M. Alkali Works Inspectors.

using

The Housing Repairs and Rents Act, 1954, which became operative on the h August, introduces the new feature of acquisition of unfit houses by the poration for the purpose of patching to make them more tolerable for ng in until it is practicable to secure their demolition. In addition the Act amended existing law relating to rent control and the result is shown in the eased number of applications for certificates of disrepair from tenants cerned with the "repairs increase" permitted under the Act subject to the ervance of the prescribed conditions.

With the approval of the City Council, I was appointed, in addition to my ting appointments with the Corporation, Medical Officer of Health to the chester Port Health Authority with effect from May, 1955.

The responsibilities of the Health Department continue to increase and I most grateful to the staff of the Department for their loyal and cheerful peration and efficiency. I again record thankfully my appreciation of the inued support and friendly encouragement of the Chairman and the bers of the Health Committee.

I have the honour to be,

My Lord Mayor, Ladies and Gentlemen,

Your obedient servant,

Charles Metcalfe Brown,

Medical Officer of Health.

HEALTH COMMITTEE

1954-55

CHAIRMAN—Alderman W. Chadwick, M.B., Ch.B.

DEPUTY CHAIRMAN—Councillor J. McGrath.

THE LORD MAYOR—Alderman R. S. Harper, J.P.

Alderman J. E. Burgess
,, T. M. Larrad, J.P.
,, W. Onions, M.B.E., J.P.
,, F. E. Tylecote, J.P., M.D., F.R.C.P.
,, T. Walker, J.P.
Councillor Hannah Baldwin, J.P.
,, Nellie Beer, J.P.
,, James Bowes
,, P. Chadwick, J.P.
,, B. Conlan
,, J. Conway

Councillor Eveline Hill, M.P., J.
,, Mary Knight
,, B. Lawson
,, T. Lomas
,, G. McCall (resigned 3.11.54)
,, H. Pigott, M.B., B.Ch.
,, W. Sharp
,, Winifred Smith (appointed 3.11.
,, Lily Thomas, J.P.
,, R. E. Thomas, J.P.
,, Mabel S. Whittaker

SUB-COMMITTEES

e following sub-committees are appointed to carry out certain of the referred to the Health Committee; these are particularized below. the exception of those of the Sanitary Defects Sub-committee, their dings are subject to approval by the Health Committee.

ry

itation and buildings; nuisance and offensive trades; common lodging- and houses let-in-lodgings; factories; workplaces and shops; provisions ng food and drugs; poisons and pharmacy; public conveniences; the g of certificates of disrepair and reports to owners under the Rent and ge Restrictions Acts; the Rag Flock and Other Filling Materials Act, the Shops Act, 1950, and the Young Persons (Employment) Act, 1938; tement of smoke nuisances and atmospheric pollution; hairdressers tion; street traders and persons trading in food on open sites; and all ns relating to the management and administration of the Sanitary s Division with the exception of those relating to the appointment of laries, wages and conditions of service of officers and servants.

y Defects

his Sub-committee are delegated under Section 273 of the Public Health 36, the Health Committee's powers to deal with urgent cases of sanitary in premises and it is empowered to authorize the service of notices wners, occupiers or other persons responsible requiring them, within od specified in the notices, to execute the works required and, in the f the notices not being complied with, to instruct the Medical Officer h to carry out the work required and/or to instruct the Town Clerk to the necessary summary proceedings.

ty and Child Welfare

rnity and child welfare, including all the duties in the proposals of Council under the National Health Service Acts, relating to midwifery, isiting, care of mothers and young children (excepting the portion to the management of Knowle House), home nursing, prevention of care and after-care and home helps; the cleansing of persons with vermin; the control and management of day nurseries; and the ration of the Nursing Services Division with the exception of questions to the appointment of staff, salaries, wages and conditions of service rs and servants.

entres

natters relating to the planning, siting, erection and equipment of ntres, and to undertake, as and when they are erected, the control agement of health centres in the City with the exception of questions o the appointment of staff, salaries, wages and conditions of service s and servants.

Health

atters arising out of the proposals of the City Council under the Health Service Act concerning mental health with the exception of relating to the appointment of staff, salaries, wages and conditions of officers and servants.

Ambulance and Transport

All matters relating to the control and management of ambulances ambulance stations, passenger cars and other vehicles and garages, with exception of questions relating to the appointment of staff, salaries, wages conditions of service of officers and servants.

Residential Homes

All matters relating to the control and management of Dr. Garrett Mem Home, Knowle House, Langho Colony, Ashton House and Walton H with the exception of questions relating to the appointment of staff, sala wages and conditions of service of officers and servants, and the purchas bulk supplies.

Staff

All questions affecting the appointment of staff, salaries, wages and condi of service of officers and servants in the employ of the Health Committee.

Supplies

The purchase of bulk supplies of articles required by Langho Co Dr. Garrett Memorial Home, Knowle House, Ashton House, Walton H and the day nurseries, and those required by the Children's, Educatio Welfare Services Committee for use at residential institutions under control.

HEALTH OFFICERS

(A) Medical

Metcalfe Brown, M.D., D.P.H., rrister-at-Law	Medical Officer of Health
M. M. Grierson, O.B.E., M.D., .H., F.R.S.E.	Deputy Medical Officer of Health
Griffiths, B.SC., M.R.C.S., .C.P., D.P.H.	Senior Medical Officer—Administrative
I. Burke, M.B., CH.B., D.P.H.	Senior Medical Officer—Nursing Services
Greenberg, M.B., M.R.C.P.	Consultant Chest Physician—Part-time

(B) Other professional

ham, F.S.I.A., M.R.SAN.I.	Chief Sanitary Inspector
N. Leather, B.SC., F.R.I.C.	Public Analyst

(c) Lay

y, M.B.E.	Chief Administrative Assistant—Nursing Services Division
Wilkinson	Chief Administrative Assistant—General Services Division

Number of staff employed in the Health Department in December, 1954

(part-time staff expressed as the whole-time equivalent)

Type of staff		Number employed
Administrative and clinical medical officers		4
Clinical medical officers		15
Analytical chemists and laboratory assistants		8
Nursing staffs:—		
Health visiting	107	
Midwifery	66	
Day nurseries	289	
Residential homes	99	
Other	5	
	—	566
Medical auxiliaries		10
Teachers		4
Social workers		9
Occupational centre supervisors and assistants ..		15
Sanitary inspectors..		62
Administrative and clerical staff		155
Ambulance control room staff		13
Storekeepers and assistants		6
Supervisors—public conveniences service		2
Operational staff, manual workers, etc.:—		
Ambulance and transport service	158	
Public conveniences service	75	
Domestic staff in day nurseries	70	
Domestic staff in residential homes	64	
Home helps..	62	
Domestic staff in municipal hostels	60	
Rodent operatives	32	
Others	46	
	—	567
Total		1,436

The following staffs were employed on an agency basis, and are not included abov

81 district nurses and 5 district midwives employed by the Manchester District Institution.

11 district midwives employed by St. Mary's Hospital extern service.

Section I

ral Services Division

GENERAL STATISTICS

METEOROLOGY

VITAL STATISTICS

REGISTRAR GENERAL'S ABSTRACT

INFECTIOUS DISEASES

FOOD POISONING

EPIDEMIOLOGY

GENERAL MEDICAL SERVICES

MENTAL HEALTH

HEALTH EDUCATION

AMBULANCE SERVICE

HOSPITAL CAR SERVICE

MUNICIPAL CAR POOL

DISINFECTION

RESIDENTIAL HOMES:
- Langho Colony for sane epileptics
- Dr. Garrett Memorial Home for convalescent children

MUNICIPAL HOSTELS:
- Ashton House for women
- Walton House for men

GENERAL STATISTICS

Registrar General's estimated population mid-year, 1954

Males 329,432
Females 369,568 .. ..

Census population, 1951 .. Males 331,355
Females 371,727 .. ..

Live births		Males	Females	Total
	Legitimate ..	5,657	5,310	10,967
	Illegitimate ..	478	398	876 ..

Live birth rate per 1,000 of population .. ..

Still-births		Males	Females	Total
	Legitimate ..	174	174	348
	Illegitimate ..	12	29	41 ..

Still-birth rate per 1,000 total births (live and still) .. ..

Deaths .. .. Males 4,412
Females 4,113 .. ..

Death rate per 1,000 of population Males .. 13·39
Females 11·13 .. .. ..

Comparability factor .. .. Births .. ..
Deaths .. ..

Birth rate as adjusted by factor .. ..

Death rate as adjusted by factor .. ..

Excess of births over deaths.. .. ..

Percentage of mortality occurring in institutions .. ..

Maternal mortality :—

	Deaths	Rate per 1,000 total births	
Sepsis of pregnancy and abortion	..	..	
Other maternal causes..	6	0·49	.. ..

Deaths of infants under one year of age:—

All infants .. .. 349—rate per 1,000 live births .. ..

Legitimate infants 322—rate per 1,000 legitimate live births

Illegitimate infants 27—rate per 1,000 illegitimate live births

Number of persons married per 1,000 of population.. .. .. ..

City of Manchester.

MUNICIPAL WARDS

1954

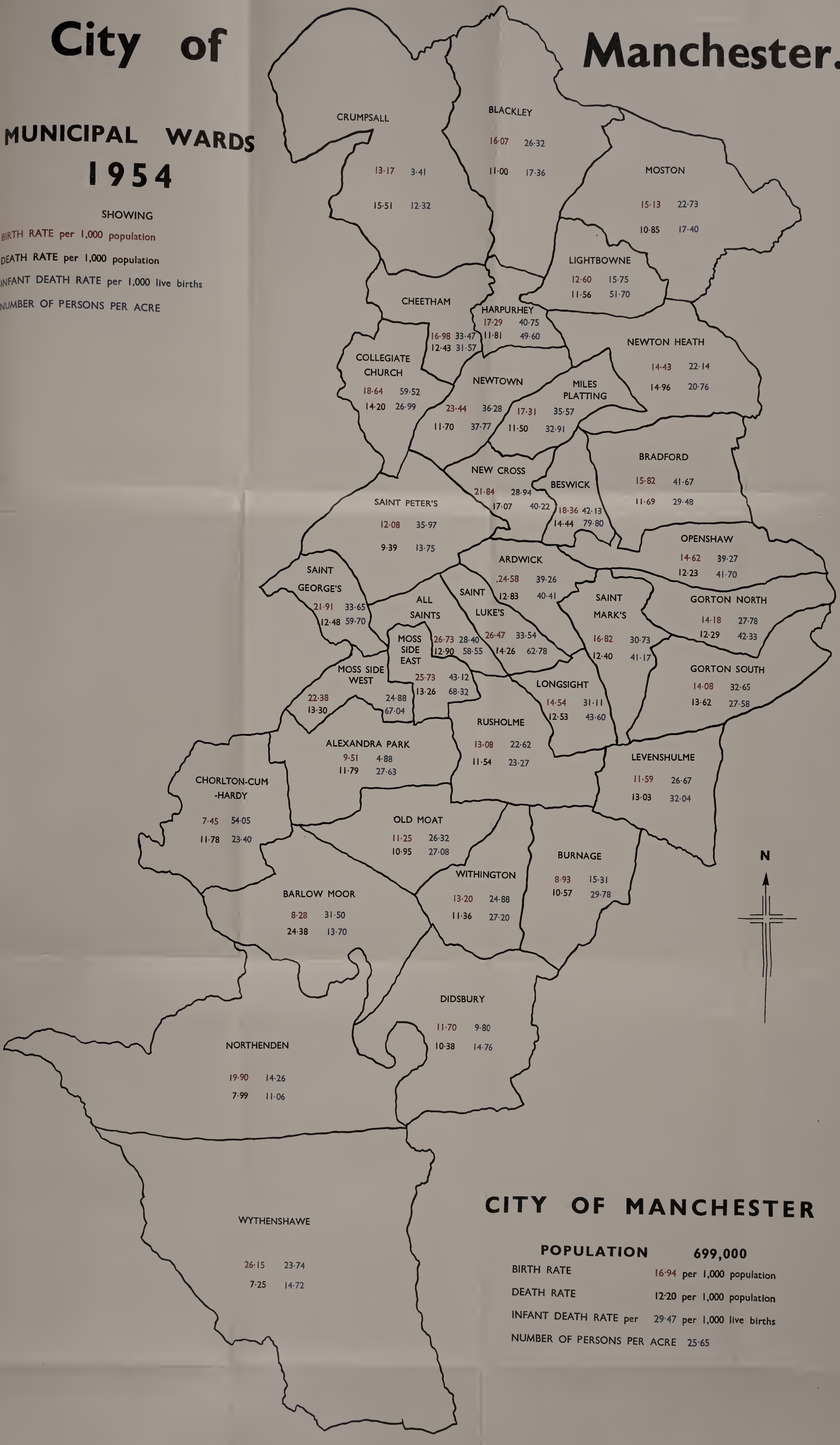
SHOWING

BIRTH RATE per 1,000 population

DEATH RATE per 1,000 population

INFANT DEATH RATE per 1,000 live births

NUMBER OF PERSONS PER ACRE



CITY OF MANCHESTER

POPULATION	**699,000**
BIRTH RATE	16·94 per 1,000 population
DEATH RATE	12·20 per 1,000 population
INFANT DEATH RATE per	29·47 per 1,000 live births
NUMBER OF PERSONS PER ACRE	25·65

ea of the City in acres		27,255
mber of persons per acre		26
mber of occupied structurally separate dwellings at Census 1951		201,027
mber of persons per occupied structurally separate dwellings at Census 1951		3·50
mber of houses according to Rate Book (1st April, 1954)		209,944
mber of persons per house		3·33
eable value (1st April, 1954)		£6,756,071
n represented by a penny rate (estimated)		£26,800
Number of new houses erected during 1954 :		
By local authority	2,090	
By other bodies or persons	324	
		2,414

The City of Manchester is the centre of one of the largest industrial areas he world. Road and rail communications, the Port of Manchester and in nt years, Manchester Airport, from which regular transatlantic air services operate, have combined to retain the City's importance in industry and merce and its business links with the rest of the world.

Whilst a large percentage of the population is employed in transport and ibutive services the chief industries in the City are engineering, textiles clothing.

In addition to its importance in the industrial world, the City also claims ninence in medical, educational and scientific fields through its hospitals, ical School, University and College of Technology.

Comprehensive housing schemes are gradually causing the poorer alized inhabited sites to disappear, and to the north and south of the City are now large housing estates which have been quoted as examples of the modern methods.

METEOROLOGY

Extracts from readings taken at the Whitworth Observatory, Manchester

	Wet bulb	Dry bulb	Mean maximum temperature	Mean minimum temperature	Mean temperature	Total rainfall (inches)	Total number of wet days	Total hours of sunshine	Number of days on which
January	36·0	37·7	42·1	34·5	38·3	3·47	10	25·11	
February	35·7	36·9	41·5	33·4	37·5	2·94	13	26·04	
March	40·1	42·6	48·7	37·9	43·3	2·58	12	73·16	
April	42·7	46·6	54·9	39·6	47·3	0·68	5	143·10	
May	49·0	53·0	60·4	46·8	53·6	2·66	13	98·58	
June	52·3	56·3	62·9	50·8	56·9	2·99	15	119·70	
July	53·6	57·1	62·7	51·5	57·1	5·18	17	84·94	
August	54·9	57·7	64·4	52·6	58·5	5·15	23	71·61	
September	51·3	54·7	61·8	48·7	55·3	4·04	19	117·00	
October	51·3	53·3	59·0	48·5	53·7	5·45	21	47·43	
November	42·3	44·1	49·6	39·3	44·5	5·52	23	27·00	
December	42·6	44·7	49·0	40·5	44·7	5·02	24	16·43	
YEAR ..	46·0	48·7	54·7	43·7	49.2	45·68	195	850·10	
	Means					Totals			

Extracts from readings taken at Manchester Airport, Ringway

	Wet bulb	Dry bulb	Mean maximum temperature	Mean minimum temperature	Mean temperature	Total rainfall (inches)	Total number of wet days	Total hours of sunshine	Number of days on which fog was noted at 09·00 G.M.T.
ary	35·2	37·0	40·5	33·1	36·8	2·70	14	39.99	5
uary	34·9	36·5	41·1	32·0	36·5	2·69	14	49·28	5
ch	39·8	42·2	48·8	36·5	42·7	2·36	16	110·98	2
l	42·0	46·0	54·8	38·0	46·4	0·58	7	186·90	0
	48·1	51·9	59·7	45·0	52·3	2·79	18	119·66	2
	51·8	55·7	62·7	49·4	56·1	2·85	17	135·30	0
	53·0	56·1	62·0	50·6	56·3	3·79	22	101·99	0
st	54·3	57·0	63·7	51·8	57·7	5·03	23	96·10	0
mber	50·8	54·2	61·2	47·9	54·5	3·35	22	145·50	0
ber	51·0	53·1	57·6	48·2	52·9	5·50	25	64·48	1
mber	42·1	43·8	48·8	38·9	43·9	5·13	23	48·90	6
nber	39·9	43·9	47·1	40·1	43·6	4·46	22	29·76	0
YEAR	45·4	48·1	54·0	42·6	48·3	41·23	223	1128·84	21
	Means					Totals			

VITAL STATISTICS

Causes of death

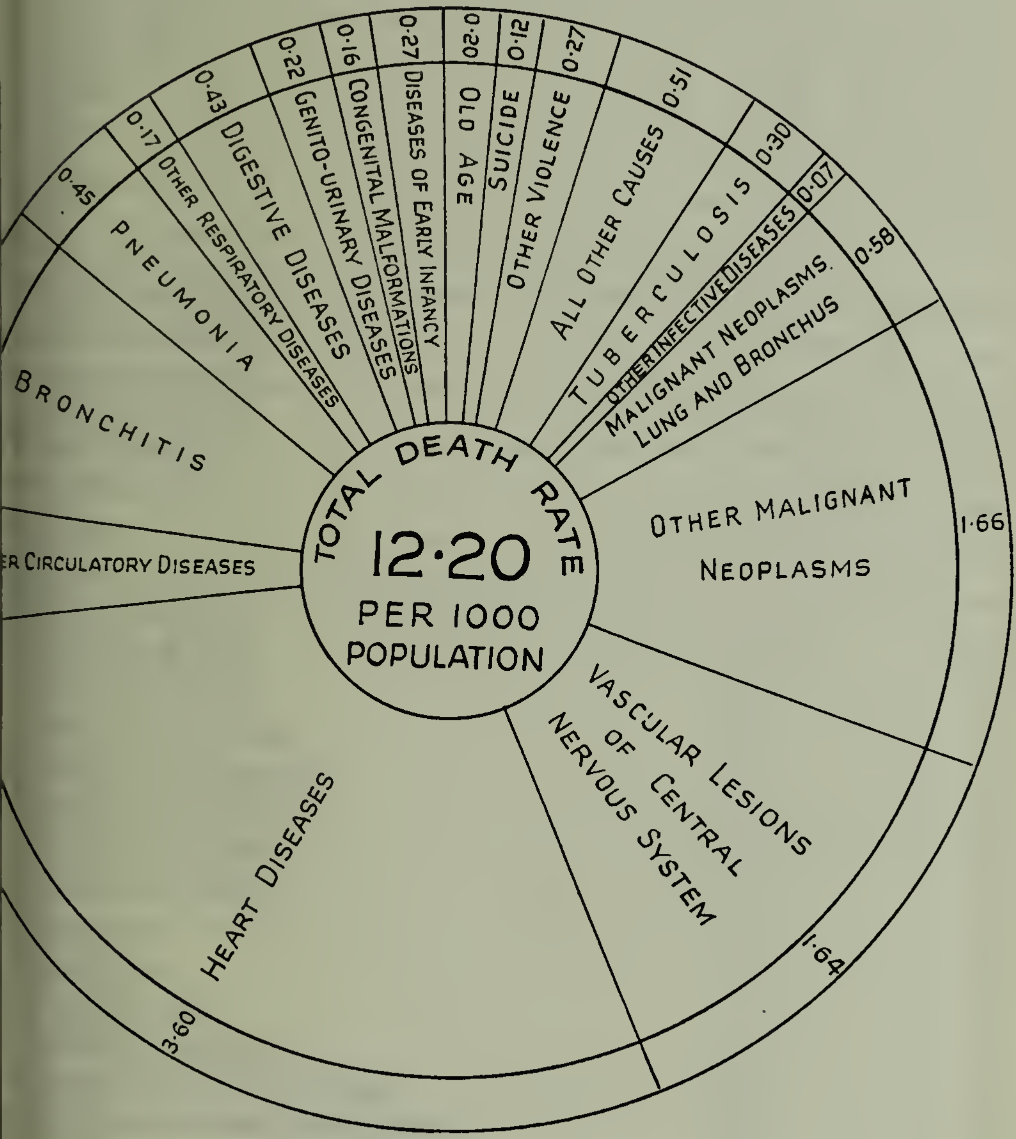
Registrar General's Return
Manchester

CAUSES OF DEATH	Male	Female	All ages	AGES AT DEATH						
				0–	1–	5–	15–	25–	45–	65–
Tuberculosis, respiratory	131	57	188	—	—	—	12	55	79	35
,, other	11	10	21	2	1	2	4	4	3	3
Syphilitic disease	14	10	24	—	—	—	1	—	14	4
Diphtheria	—	—	—	—	—	—	—	—	—	—
Whooping cough	1	3	4	1	3	—	—	—	—	—
Meningococcal infections	—	2	2	1	1	—	—	—	—	—
Acute poliomyelitis	2	—	2	—	—	2	—	—	—	—
Measles	2	1	3	1	2	—	—	—	—	—
Other infective and parasitic diseases	8	9	17	2	—	1	2	5	5	1
Malignant neoplasm, stomach	127	119	246	—	—	—	—	6	91	90
,, ,, lung, bronchus	356	49	405	—	—	—	—	23	220	124
,, breast	—	122	122	—	—	—	—	16	54	34
,, ,, uterus	—	67	67	—	—	—	—	12	33	15
Other malignant and lymphatic neoplasms	379	306	685	—	—	—	4	49	203	213
Leukaemia, aleukaemia	27	16	43	—	6	7	—	5	14	9
Diabetes	7	31	38	—	—	—	—	6	7	12
Vascular lesions of central nervous system	462	681	1143	—	—	2	5	19	226	375
Coronary disease, angina	553	297	850	—	—	—	—	24	296	322
Hypertension with heart disease	90	95	185	—	—	—	—	3	45	65
Other heart disease	585	897	1482	—	—	3	5	62	211	348
Other circulatory disease	141	191	332	—	—	—	2	10	68	99
Influenza	16	16	32	1	—	1	2	4	10	4
Pneumonia	175	156	331	42	6	2	1	16	76	66
Bronchitis	499	262	761	15	2	1	—	12	230	254
Other diseases of respiratory system	55	31	86	5	—	4	3	6	31	22
Ulcer of stomach and duodenum	82	30	112	—	1	—	1	7	40	42
Gastritis, enteritis and diarrhoea	17	22	39	11	1	—	—	4	10	6
Nephritis and nephrosis	22	31	53	—	—	—	—	8	19	14
Hyperplasia of prostate	43	—	43	—	—	—	—	—	4	15
Pregnancy, childbirth, abortion	—	6	6	—	—	—	1	5	—	—
Congenital malformations	50	59	109	81	8	2	4	4	9	1
Other defined and ill-defined diseases	373	449	822	186	13	11	10	40	156	130
Motor vehicle accidents	51	27	78	—	7	4	8	12	23	12
All other accidents	65	41	106	1	5	7	7	20	20	22
Suicide	66	20	86	—	—	—	3	22	36	16
Homicide and operations of war	2	—	2	—	—	—	1	1	—	—
TOTALS	4412	4113	8525	349	56	49	76	460	2293	235

NOTE.—A table showing the mortality rates due to various causes, etc., from onwards appears at page 30A.

DEATHS FROM PRINCIPAL CAUSES

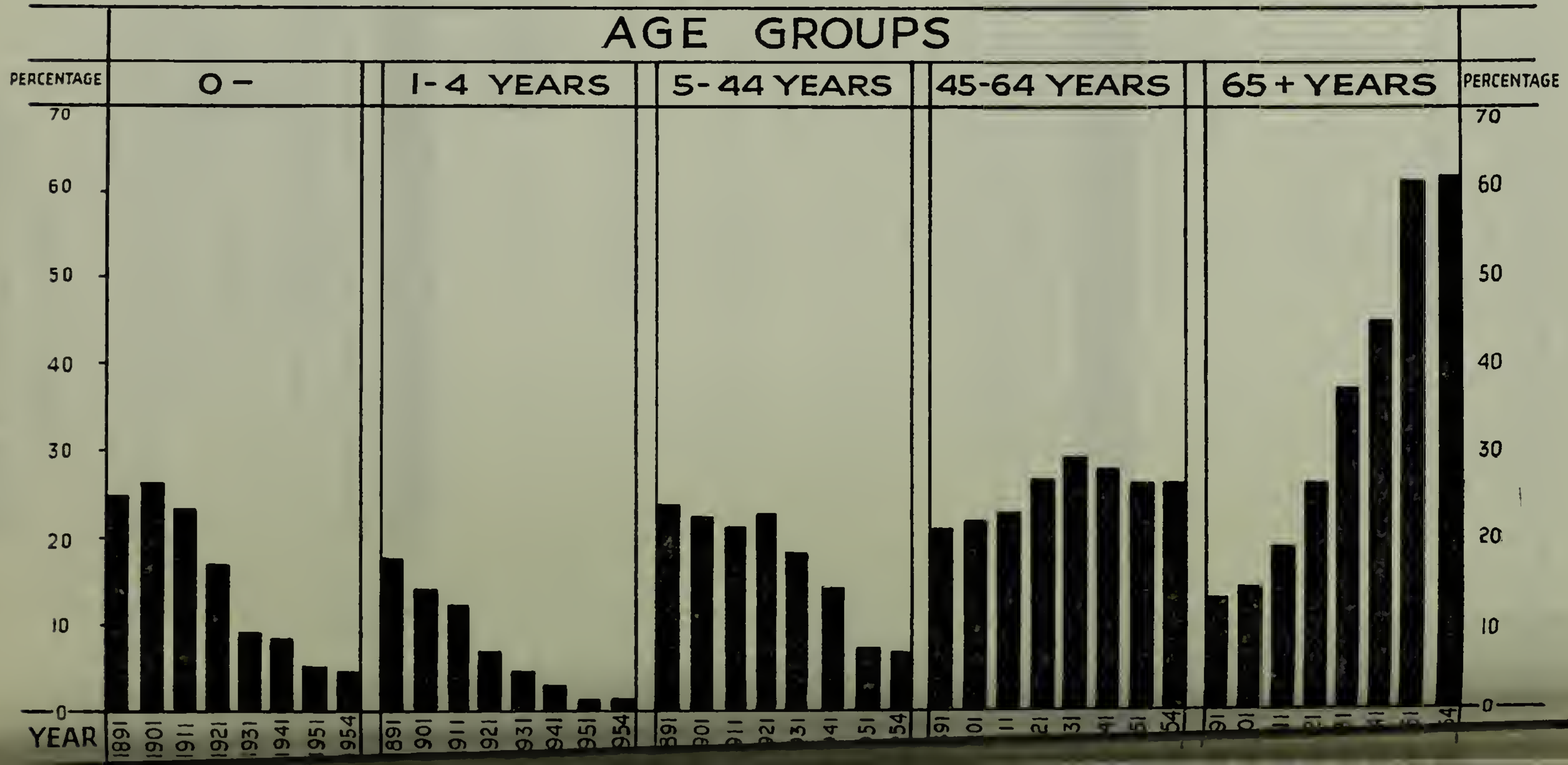
PROPORTION TO TOTAL DEATHS



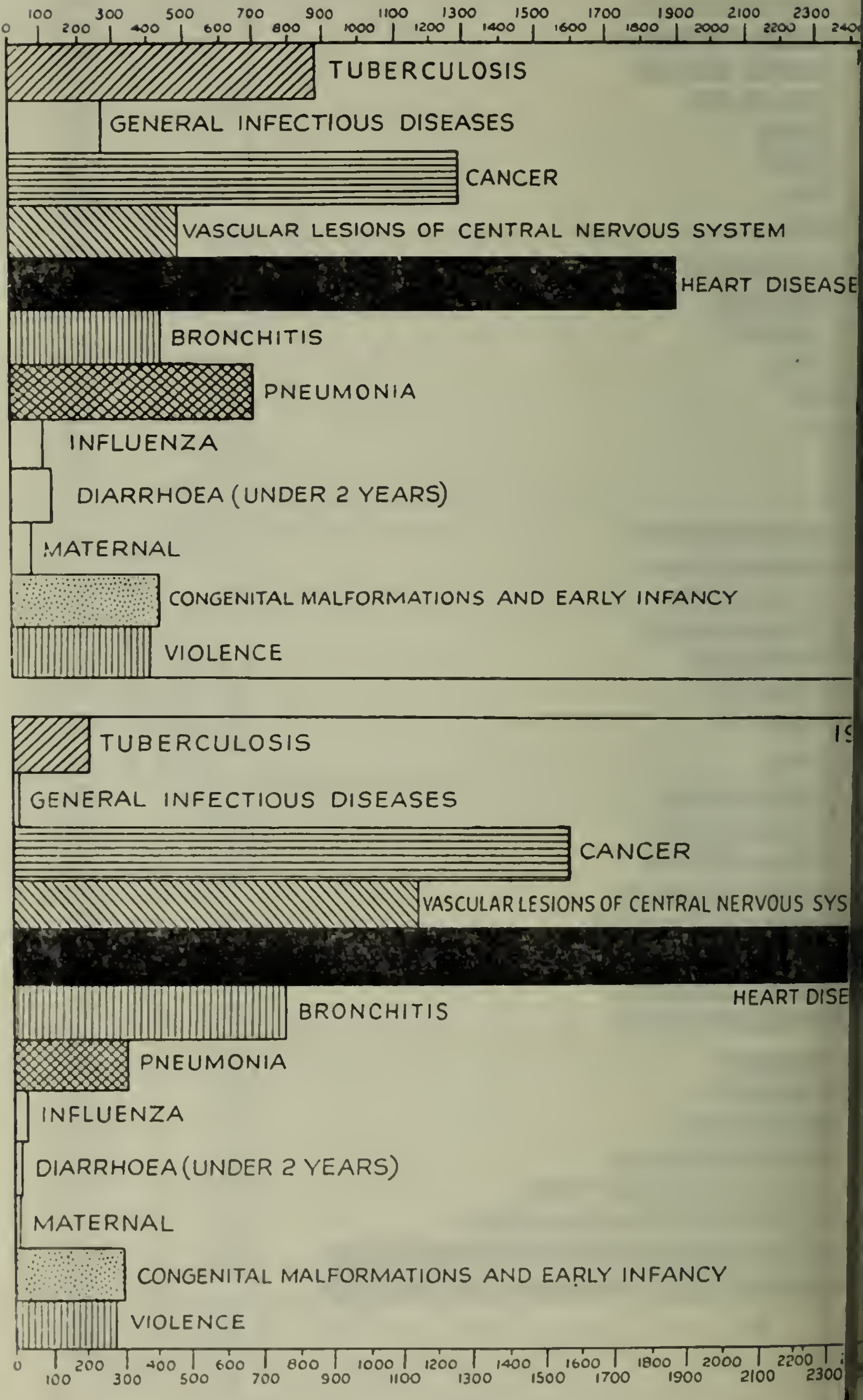
Deaths in age groups and percentages to total deaths

Year	Total number of deaths	Age groups and percentages								
		0—		1—4		5—44		45—64		
		No.	%	No.	%	No.	%	No.	%	No
1891 ..	13,202	3,299	24·99	2,225	16·85	3,178	24·07	2,756	20·88	1,74
1901 ..	11,801	3,114	26·39	1,676	14·20	2,725	23·09	2,627	22·26	1,65
1911 ..	12,272	2,901	23·64	1,516	12·35	2,711	22·09	2,790	22·74	2,35
1921 ..	10,093	1,707	16·91	728	7·21	2,313	22·92	2,687	26·62	2,65
1931 ..	10,618	1,027	9·67	503	4·74	1,943	18·30	3,144	29·61	4,00
1941 ..	10,016	832	8·31	265	2·65	1,467	14·65	2,886	28·81	4,56
1951 ..	9,676	439	4·54	64	0·66	748	7·73	2,568	26·54	5,85
1952 ..	8,576	424	4·94	75	0·87	637	7·43	2,410	28·10	5,03
1953 ..	8,638	373	4·32	58	0·67	602	6·97	2,349	27·19	5,25
1954 ..	8,525	349	4·09	56	0·66	585	6·86	2,293	26·90	5,24

PERCENTAGES OF DEATHS IN VARIOUS AGE GROUPS TO TOTAL DEATHS
1891 – 1954



PRINCIPAL CAUSES OF DEATH
1934 AND 1954



Deaths in wards for various diseases and death rates per 1,000 of the population

(Figures compiled by the Medical Officer of Health)

† WARDS	ESTIMATED POPULATION	WHOOPING COUGH		DIPHTHERIA		MEASLES		TUBERCULOSIS ALL FORMS		SYPHILITIC DISEASES		DISEASES OF CIRCULATORY SYSTEM		*MALIGNANT NEOPLASMS		PNEUMONIA		BRONCHITIS		DIGESTIVE SYSTEM		GENITO URINARY SYSTEM		ALL CAUSES	
		Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
CITY OF MANCHESTER..	699000	4	0·01	—	—	3	0·00	208	0·30	24	0·03	2842	4·07	1567	2·24	317	0·45	761	1·09	298	0·43	156	0·22	8525	12·20
Alexandra Park	21552	—	—	—	—	—	—	7	0·32	—	—	81	3·76	56	2·60	7	0·32	14	0·65	13	0·60	5	0·23	254	11·79
All Saints	18444	—	—	—	—	1	0·05	11	0·60	5	0·27	62	3·36	59	3·20	9	0·49	18	0·98	11	0·60	6	0·33	238	12·90
Ardwick	17618	—	—	—	—	—	—	5	0·28	1	0·06	67	3·80	36	2·04	10	0·57	25	1·42	7	0·40	4	0·23	226	12·83
Barlow Moor	15340	—	—	—	—	—	—	4	0·26	2	0·13	158	10·30	49	3·19	23	1·50	19	1·24	7	0·46	5	0·33	374	24·38
Beswick	19391	2	0·10	—	—	—	—	9	0·46	—	—	90	4·64	37	1·91	17	0·88	36	1·86	5	0·26	4	0·21	280	14·44
Blackley	21281	—	—	—	—	—	—	8	0·38	1	0·05	64	3·01	68	3·20	9	0·42	22	1·03	5	0·23	1	0·05	234	11·00
Bradford	22762	—	—	—	—	—	—	5	0·22	—	—	80	3·51	61	2·68	12	0·53	27	1·19	9	0·40	3	0·13	266	11·69
Burnage	21946	—	—	—	—	—	—	4	0·18	—	—	78	3·55	33	1·50	9	0·41	24	1·09	9	0·41	3	0·14	252	10·57
Cheetham	14079	—	—	—	—	—	—	7	0·50	2	0·14	66	4·69	25	1·78	7	0·50	17	1·21	4	0·28	2	0·14	175	12·43
Chorlton-cum-Hardy	19870	—	—	—	—	—	—	3	0·15	—	—	82	4·13	50	2·52	6	0·30	17	0·86	4	0·20	11	0·55	234	11·78
Collegiate Church	13520	—	—	—	—	—	—	2	0·15	2	0·15	53	3·92	42	3·11	11	0·81	15	1·11	4	0·30	10	0·74	192	14·20
Crumpsall	22240	—	—	—	—	—	—	2	0·09	—	—	150	6·74	49	2·20	14	0·63	16	0·72	10	0·45	14	0·63	345	15·51
Didsbury	17430	—	—	—	—	—	—	1	0·06	—	—	63	3·61	37	2·12	5	0·29	5	0·29	12	0·69	5	0·29	181	10·38
Gorton North	22856	—	—	—	—	—	—	9	0·39	1	0·04	78	3·41	54	2·36	6	0·26	27	1·18	10	0·44	8	0·35	281	12·29
Gorton South	17402	—	—	—	—	—	—	8	0·46	—	—	76	4·37	39	2·24	7	0·40	21	1·21	11	0·63	5	0·29	237	13·62
Harpurhey	18452	—	—	—	—	—	—	3	0·16	1	0·05	76	4·12	35	1·90	6	0·33	27	1·46	11	0·60	4	0·22	218	11·81
Levenshulme	19415	—	—	—	—	—	—	5	0·26	—	—	99	5·10	39	2·01	6	0·31	18	0·93	7	0·36	6	0·31	253	13·03
Lightbowne	20163	—	—	—	—	—	—	3	0·15	—	—	81	4·02	38	1·88	6	0·30	21	1·04	12	0·60	4	0·20	233	11·56
Longsight	15477	—	—	—	—	—	—	—	—	1	0·06	73	4·72	32	2·07	3	0·19	18	1·16	6	0·39	1	0·06	194	12·53
Miles Platting	14613	—		—	—	—	—	5	0·34	—	—	49	3·35	29	1·98	9	0·62	25	1·71	6	0·41	5	0·34	168	11·50
Moss Side East	18924	—	—	—	—	—	—	7	0·37	1	0·05	81	4·28	44	2·33	10	0·53	24	1·27	7	0·37	3	0·16	251	13·26
Moss Side West	17966	—	—	—	—	1	0·06	6	0·33	—	—	91	5·07	39	2·17	10	0·56	19	1·06	9	0·50	2	0·11	239	13·30
Moston	20363	—	—	—	—	—	—	4	0·20	—	—	59	2·90	53	2·60	8	0·39	20	0·98	8	0·39	4	0·20	221	10·85
New Cross	14238	—	—	—	—	—	—	10	0·70	1	0·07	87	6·11	44	3·09	14	0·98	28	1·97	11	0·77	1	0·07	243	17·07
Newton Heath	18785	—	—	—	—	—	—	4	0·21	—	—	112	5·96	49	2·61	7	0·37	17	0·90	12	0·64	8	0·43	281	14·96
Newtown	18811	—	—	—	—	—	—	10	0·53	—	—	53	2·82	36	1·91	7	0·37	40	2·13	8	0·43	5	0·27	220	11·70
Northenden	24669	—	—	—	—	—	—	8	0·32	—	—	59	2·39	52	2·11	11	0·45	8	0·32	7	0·28	4	0·16	197	7·99
Old Moat	16894	—	—	—	—	—	—	7	0·41	—	—	59	3·49	36	2·13	3	0·18	24	1·42	6	0·36	1	0·06	185	10·95
Openshaw	22644	—	—	—	—	—	—	3	0·13	1	0·04	96	4·24	60	2·65	10	0·44	26	1·15	6	0·26	3	0·13	277	12·23
Rusholme	16897	—	—	—	—	—	—	5	0·30	2	0·12	74	4·38	30	1·78	3	0·18	13	0·77	8	0·47	4	0·24	195	11·54
St. George's	18934	—	—	—	—	—	—	7	0·37	—	—	80	4·21	36	1·90	19	1·00	28	1·47	8	0·42	1	0·05	237	12·48
St. Luke's	18019	—	—	—	—	—	—	7	0·39	1	0·06	81	4·50	39	2·16	6	0·33	20	1·11	12	0·67	4	0·22	257	14·26
St. Mark's	21284	—	—	—	—	—	—	9	0·42	—	0·05	94	4·42	52	2·44	4	0·19	25	1·17	11	0·52	2	0·09	264	12·40
St. Peter's	11507	1	0·09	—	—	—	—	3	0·26	—	—	25	2·17	16	1·39	8	0·70	20	1·74	5	0·43	2	0·17	108	9·39
Withington	15230	—	—	—	—	—	—	1	0·07	—	—	60	3·94	35	2·30	2	0·13	11	0·72	6	0·39	1	0·07	173	11·36
Wythenshawe..	49934	1	0·02	—	—	1	0·02	16	0·32	1	0·02	105	2·10	78	1·56	13	0·26	25	0·52	11	0·22	5	0·10	362	7·25

NOTES—* Includes neoplasms of lymphatic and haematopoietic tissues.

† The municipal wards are shown as they were constituted at 1st January, 1954.

†Wards	population	acres	per acre	Total	Rate per 1,000 pop.	Total	Rate per 1,000 pop.	Natural rate of increase	under 1 year per 1,000 live births
City of Manchester ..	699000	27255	25·65	11843	16·94	8525	12·20	+ 4·74	29·47
Alexandra Park ..	21552	780	27·63	205	9·51	254	11·79	— 2·28	4·88
All Saints ..	18444	315	58·55	493	26·73	238	12·90	+ 13·83	28·40
Ardwick ..	17618	436	40·41	433	24·58	226	12·83	+ 11·75	39·26
Barlow Moor ..	15340	1120	13·70	127	8·28	374	24·38	— 16·10	31·50
Beswick ..	19391	243	79·80	356	18·36	280	14·44	+ 3·92	42·13
Blackley ..	21281	1226	17·36	342	16·07	234	11·00	+ 5·07	26·32
Bradford ..	22762	772	29·48	360	15·82	266	11·69	+ 4·13	41·67
Burnage ..	21946	737	29·78	196	8·93	232	10·57	— 1·64	15·31
Cheetham ..	14079	446	31·57	239	16·98	175	12·43	+ 4·55	33·47
Chorlton-cum-Hardy ..	19870	849	23·40	148	7·45	234	11·78	— 4·33	54·05
Collegiate Church ..	13520	501	26·99	252	18·64	192	14·20	+ 4·44	59·52
Crumpsall ..	22240	1805	12·32	293	13·17	345	15·51	— 2·34	3·41
Didsbury ..	17430	1181	14·76	204	11·70	181	10·38	+ 1·32	9·80
Gorton North ..	22856	540	42·33	324	14·18	281	12·29	+ 1·89	27·78
Gorton South ..	17402	631	27·58	245	14·08	237	13·62	+ 0·46	32·65
Harpurhey ..	18452	372	49·60	319	17·29	218	11·81	+ 5·48	40·75
Levenshulme ..	19415	606	32·04	225	11·59	253	13·03	— 1·44	26·67
Lightbowne ..	20163	390	51·70	254	12·60	233	11·56	+ 1·04	15·75
Longsight ..	15477	355	43·60	225	14·54	194	12·53	+ 2·01	31·11
Miles Platting ..	14613	444	32·91	253	17·31	168	11·50	+ 5·81	35·57
Moss Side East ..	18924	277	68·32	487	25·73	251	13·26	+ 12·47	43·12
Moss Side West ..	17966	268	67·04	402	22·38	239	13·30	+ 9·08	24·88
Moston ..	20363	1170	17·40	308	15·13	221	10·85	+ 4·28	22·73
New Cross ..	14238	354	40·22	311	21·84	243	17·07	+ 4·77	28·94
Newton Heath ..	18785	905	20·76	271	14·43	281	14·96	— 0·53	22·14
Newtown ..	18811	498	37·77	441	23·44	220	11·70	+ 11·74	36·28
Northenden ..	24669	2230	11·06	491	19·90	197	7·99	+ 11·91	14·26
Old Moat ..	16894	624	27·08	190	11·25	185	10·95	+ 0·30	26·32
Openshaw ..	22644	543	41·70	331	14·62	277	12·23	+ 2·39	39·27
Rusholme ..	16897	726	23·27	221	13·08	195	11·54	+ 1·54	22·62
St. George's ..	18984	318	59·70	416	21·91	237	12·48	+ 9·43	33·65
St. Luke's ..	18019	287	62·78	477	26·47	257	14·26	+ 12·21	33·54
St. Mark's ..	21284	517	41·17	358	16·82	264	12·40	+ 4·42	30·73
St. Peter's ..	11507	837	13·75	139	12·08	108	9·39	+ 2·69	35·97
Withington ..	15230	560	27·20	201	13·20	173	11·36	+ 1·84	24·88
Wythenshawe ..	49934	3392	14·72	1306	26·15	362	7·25	+ 18·90	23·74

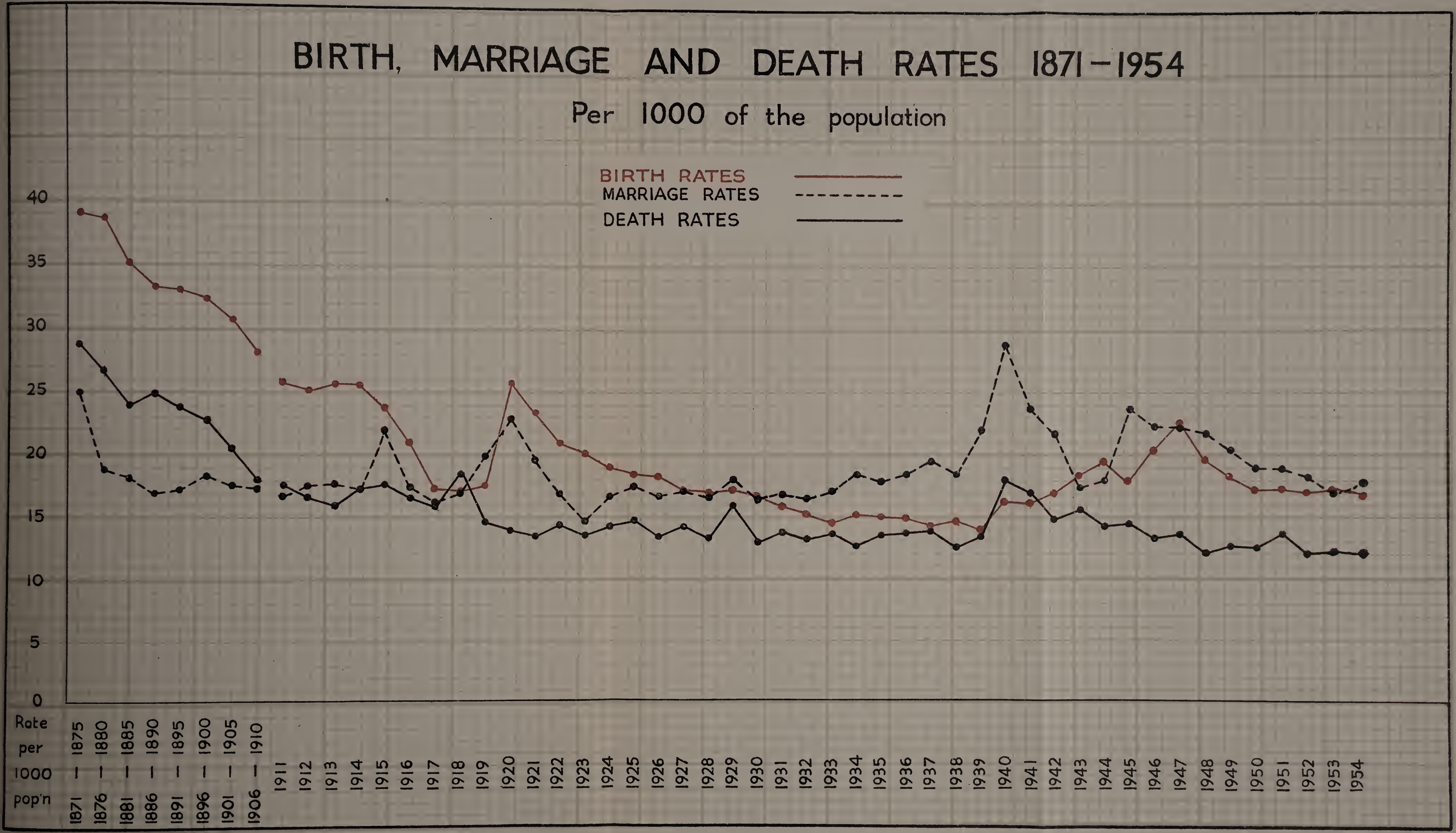
† The municipal wards are shown as they were constituted on 1st January, 1954

Causes of death in infancy and childhood

(Registrar General's abridged list)

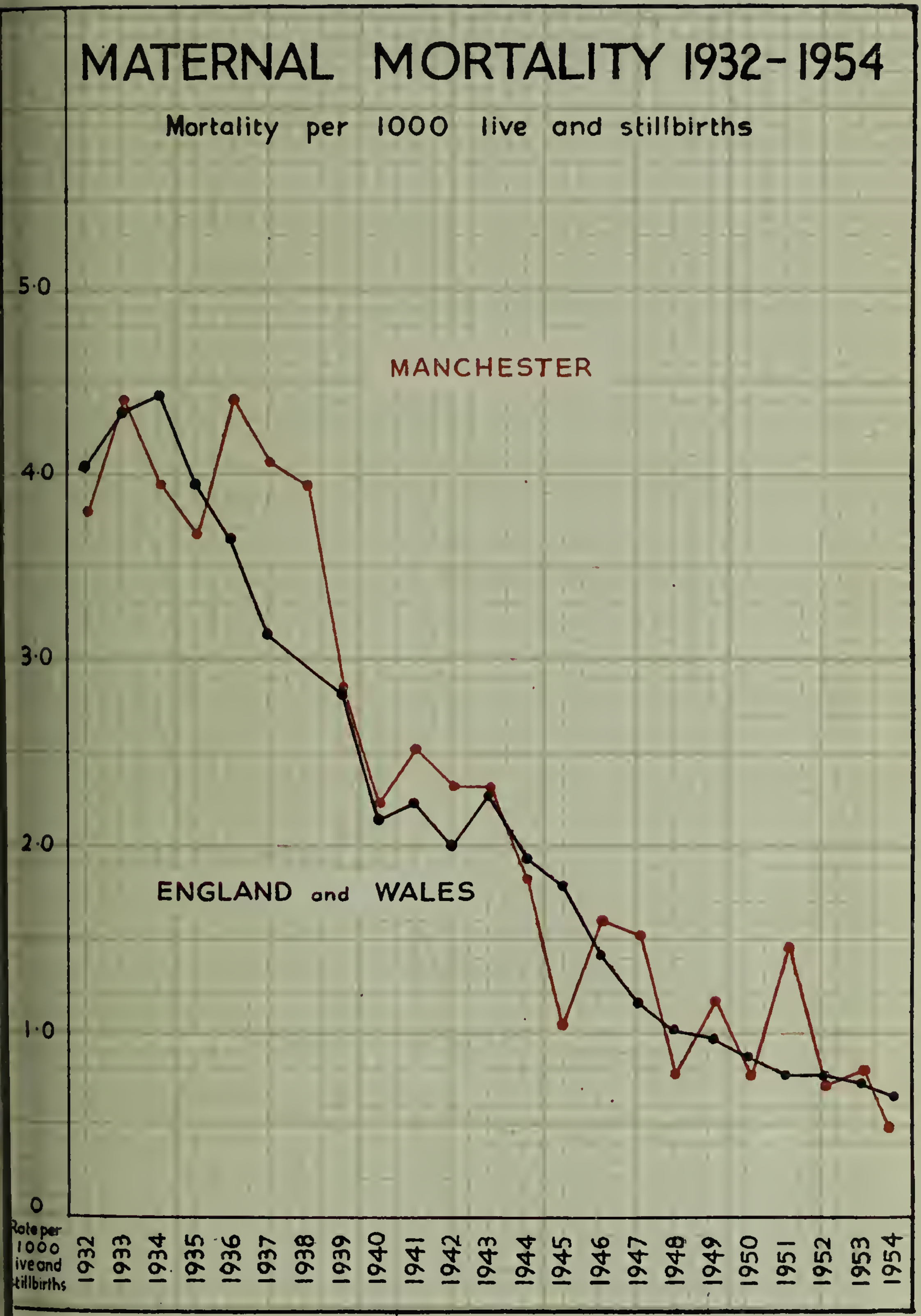
(Figures compiled by the Medical Officer of Health)

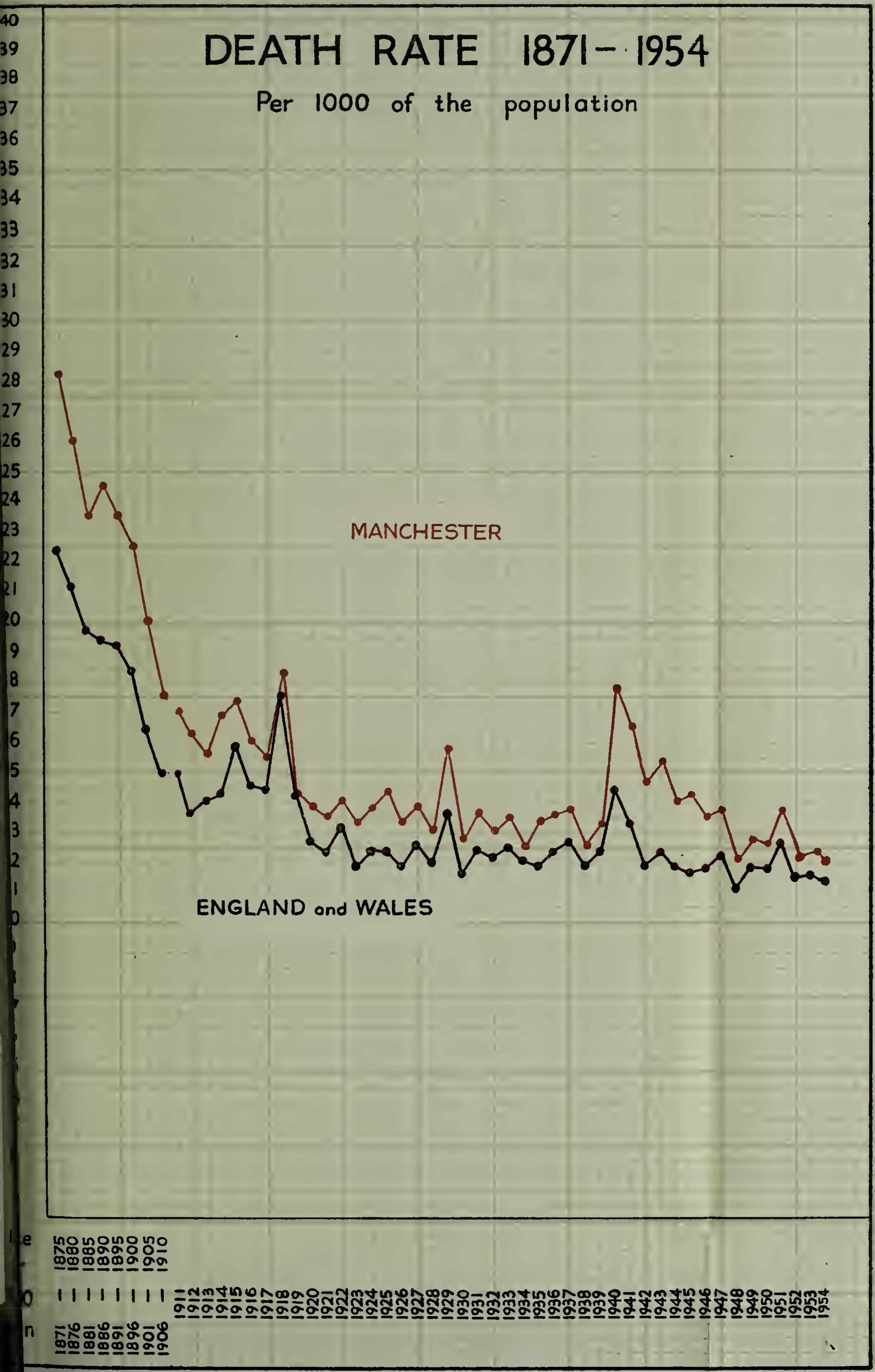
Cause of death	Under 1 year					1 to 5 years					Total under 5 Years
	Under 4 weeks	4 weeks to 3 months	3—6 months	6—12 months	Total	1—2 years	2—3 years	3—4 years	4—5 years	Total	
Tuberculosis, respiratory	—	—	—	—	—	—	—	—	—	—	—
,, meninges and central nervous system	—	—	—	1	1	—	—	—	—	—	1
,, intestine, peritoneum and mesenteric glands	—	—	—	—	—	—	—	—	—	—	—
,, other	—	—	—	—	—	1	—	—	—	1	1
Syphilitic diseases	—	—	—	—	—	—	—	—	—	—	—
Diphtheria	—	—	—	—	—	—	—	—	—	—	—
Scarlet fever	—	—	—	1	1	—	—	—	—	—	1
Whooping cough	—	1	—	—	1	1	1	—	1	3	4
Measles	—	—	—	1	1	1	1	—	—	2	3
Acute poliomyelitis	—	—	—	—	—	—	—	—	—	—	—
Meningococcal infections	—	—	—	1	1	1	—	—	—	1	2
Acute infectious encephalitis	—	—	—	—	—	—	—	—	—	—	—
Dysentery	—	—	—	—	—	—	—	—	—	—	—
Food poisoning	—	—	—	—	—	—	—	—	—	—	—
Meningitis (not tubercular)	—	2	—	1	3	2	—	—	—	2	5
Other diseases of nervous system	—	—	—	2	2	2	—	1	1	4	6
Influenza	—	—	1	—	1	—	—	—	—	—	1
Pneumonia, broncho	—	13	4	9	26	2	1	1	2	6	32
,, lobar	—	—	—	1	1	—	—	—	—	—	1
,, other	—	—	—	1	1	—	—	—	—	—	1
Bronchitis	2	7	5	1	15	—	—	1	1	2	17
Other respiratory diseases	—	2	3	—	5	—	—	—	—	—	5
Diarrhoea (4 weeks—2 years)	—	7	3	1	11	1	—	—	—	1	12
Other diseases of digestive system	1	—	3	—	4	1	1	—	2	4	8
Congenital malformations	51	18	7	5	81	5	2	—	1	8	89
Birth injury, with immaturity	17	—	—	—	17	—	—	—	—	—	17
,, ,, without immaturity	26	—	1	—	27	—	—	—	—	—	27
Atelectasis, with immaturity	27	—	—	—	27	—	—	—	—	—	27
,, without immaturity	22	2	2	—	26	—	—	—	—	—	26
Pneumonia of newborn with immaturity	2	—	—	—	2	—	—	—	—	—	2
,, ,, without immaturity	12	—	—	—	12	—	—	—	—	—	12
Diarrhoea of newborn with immaturiry	—	—	—	—	—	—	—	—	—	—	—
,, ,, without immaturity	—	—	—	—	—	—	—	—	—	—	—
Other infections of newborn with immaturity	1	—	—	—	1	—	—	—	—	—	1
,, ,, ,, ,, without immaturity	—	—	—	—	—	—	—	—	—	—	—
Haemolytic disease of newborn with immaturity	3	—	—	—	3	—	—	—	—	—	3
,, ,, ,, ,, ,, without immaturity	6	—	—	—	6	—	—	—	—	—	6
Other diseases of early infancy with immaturity	5	1	—	—	6	—	—	—	—	—	6
,, ,, ,, ,, ,, without immaturity	7	—	—	—	7	—	—	—	—	—	7
Immaturity, unqualified	50	2	—	—	52	—	—	—	—	—	52
Suffocation (overlain)	—	—	—	—	—	—	—	—	—	—	—



BIRTH, MARRIAGE AND DEATH RATES 1871–1954

Per 1000 of the population


MATERNAL MORTALITY 1932-1954
Mortality per 1000 live and stillbirths
MANCHESTER
ENGLAND and WALES
5·0
4·0
3·0
2·0
1·0
0
Rate per 1000 live and stillbirths
1932
1933
1934
1935
1936
1937
1938
1939
1940
1941
1942
1943
1944
1945
1946
1947
1948
1949
1950
1951
1952
1953
1954


DEATH RATE 1871-1954
Per 1000 of the population
MANCHESTER
ENGLAND and WALES
40
39
38
37
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29
28
27
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25
24
23
22
21
1871 - 1875
1876 - 1880
1881 - 1885
1886 - 1890
1891 - 1895
1896 - 1900
1901 - 1905
1906 - 1910
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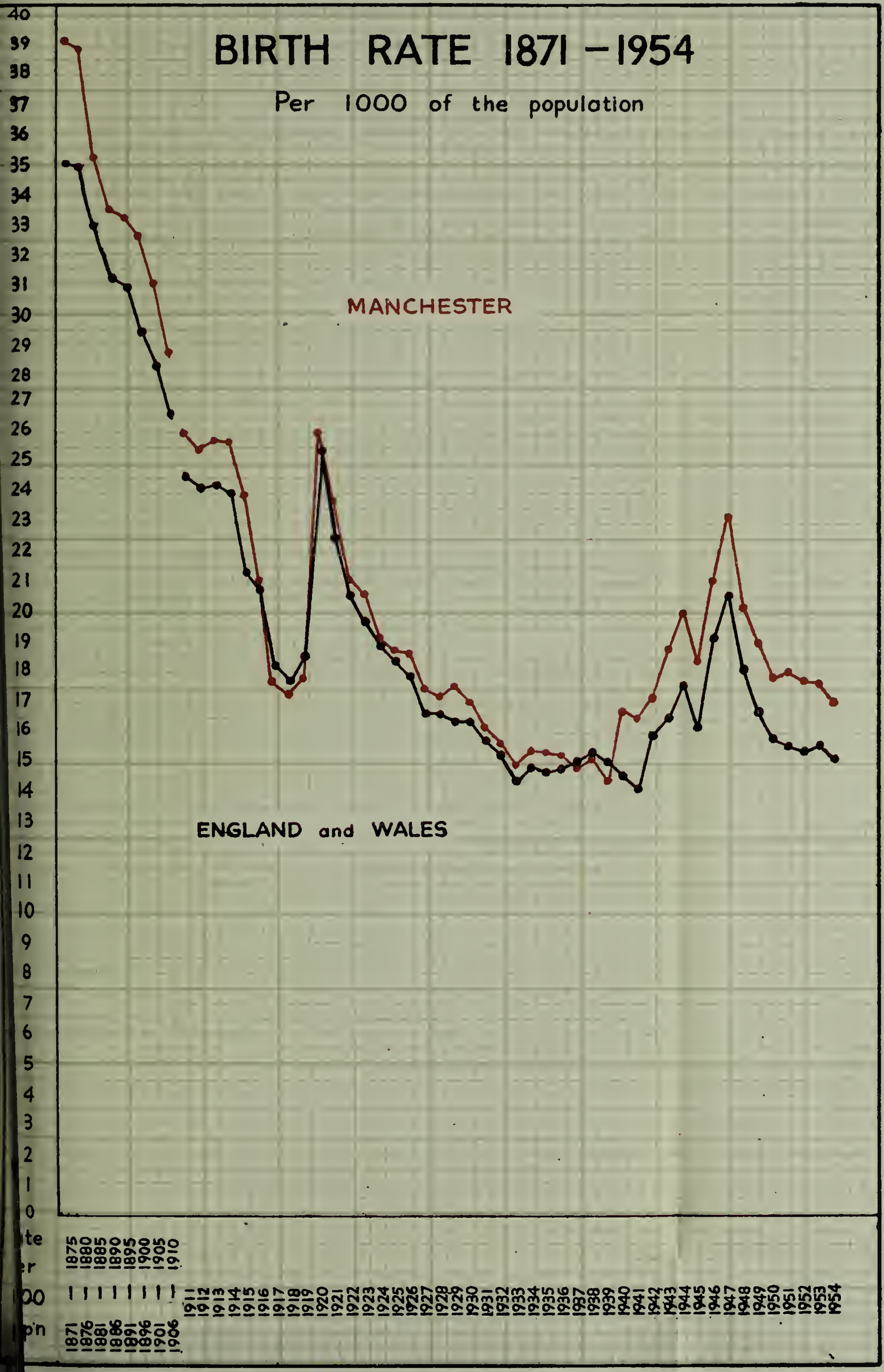


BIRTH RATE 1871 - 1954

Per 1000 of the population

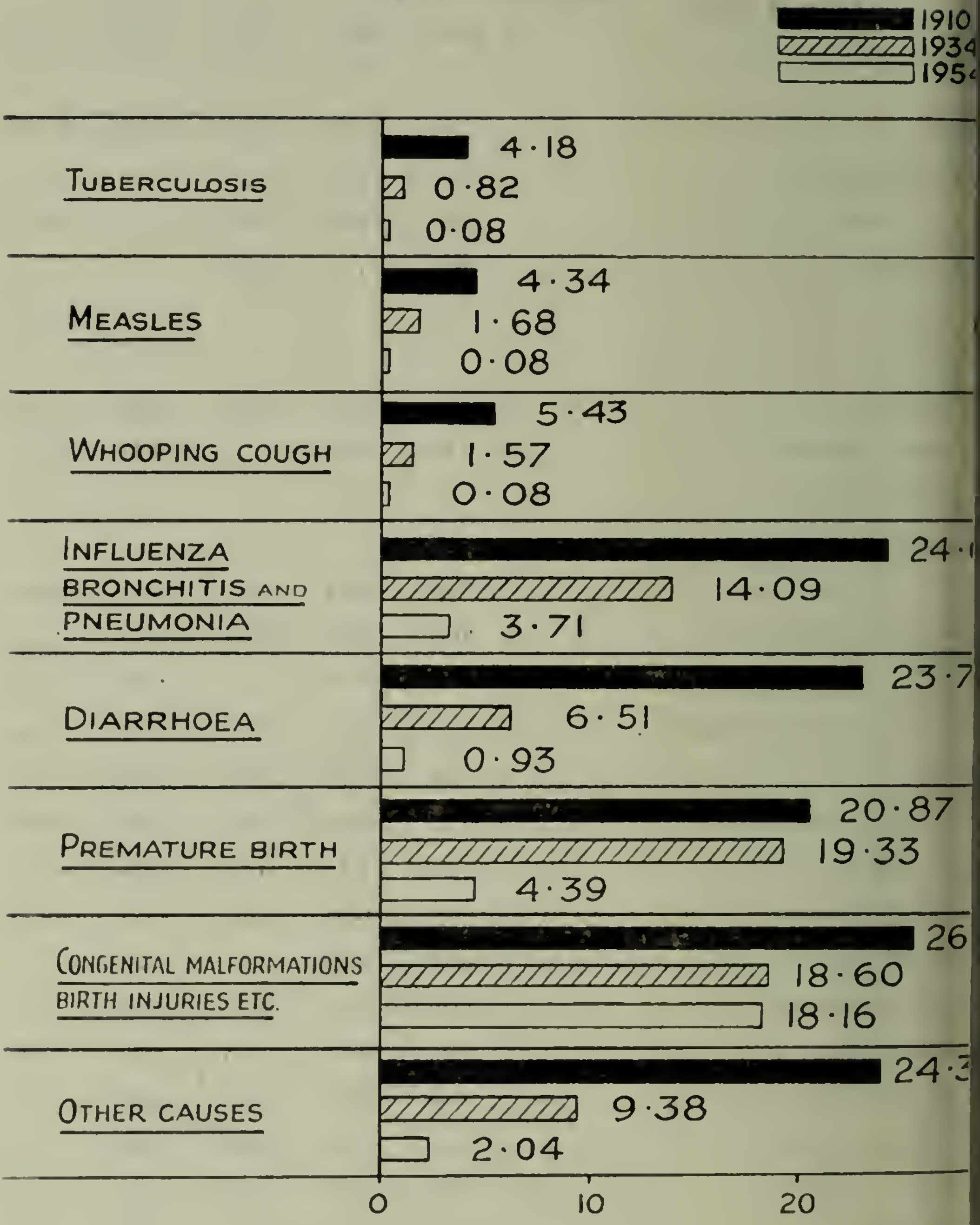
Infant mortality

Deaths from various causes per 1,000 live births

1950–54

Cause of death	Rate per 1,000 live births				
	1950	1951	1952	1953	1954
uses	37·87	35·29	34·28	30·53	29·47
ulosis respiratory	..	0·16	..	..	..
,, other	0·16	0·16	0·08	..	0·08
itic diseases	0·08	..	0·16	..	..
fever	..	..	..	..	0·08
eria	..	..	..	..	..
ing cough	1·13	0·16	0·40	0·24	0·08
ococcal infections	0·16	0·08	..	0·24	0·08
poliomyelitis	..	..	..	..	..
infectious encephalitis	..	..	..	..	..
s	0·40	0·08	0·08	..	0·08
s of the nervous system	0·56	0·96	0·24	0·08	0·42
za	..	0·24	..	0·08	0·08
onia (over 4 weeks of age)	4·42	4·50	4·12	3·03	2·36
itis	1·13	1·29	0·81	1·15	1·27
respiratory diseases	0·16	0·24	0·24	0·33	0·42
oeal diseases	3·06	2·41	1·54	0·74	0·93
digestive diseases	0·64	0·32	0·57	0·74	0·34
tis and nephrosis	0·16	0·08	..	..	..
ital malformations	5·39	4·50	6·23	4·34	6·84
njuries	3·46	3·78	3·48	3·60	3·72
diseases of early infancy	7·96	8·60	7·36	6·87	7·60
urity, unqualified	6·51	4·82	6·95	6·96	4·39
e	0·96	1·61	1·05	1·23	0·08
er causes	1·53	1·30	0·97	0·90	0·62

INFANT MORTALITY

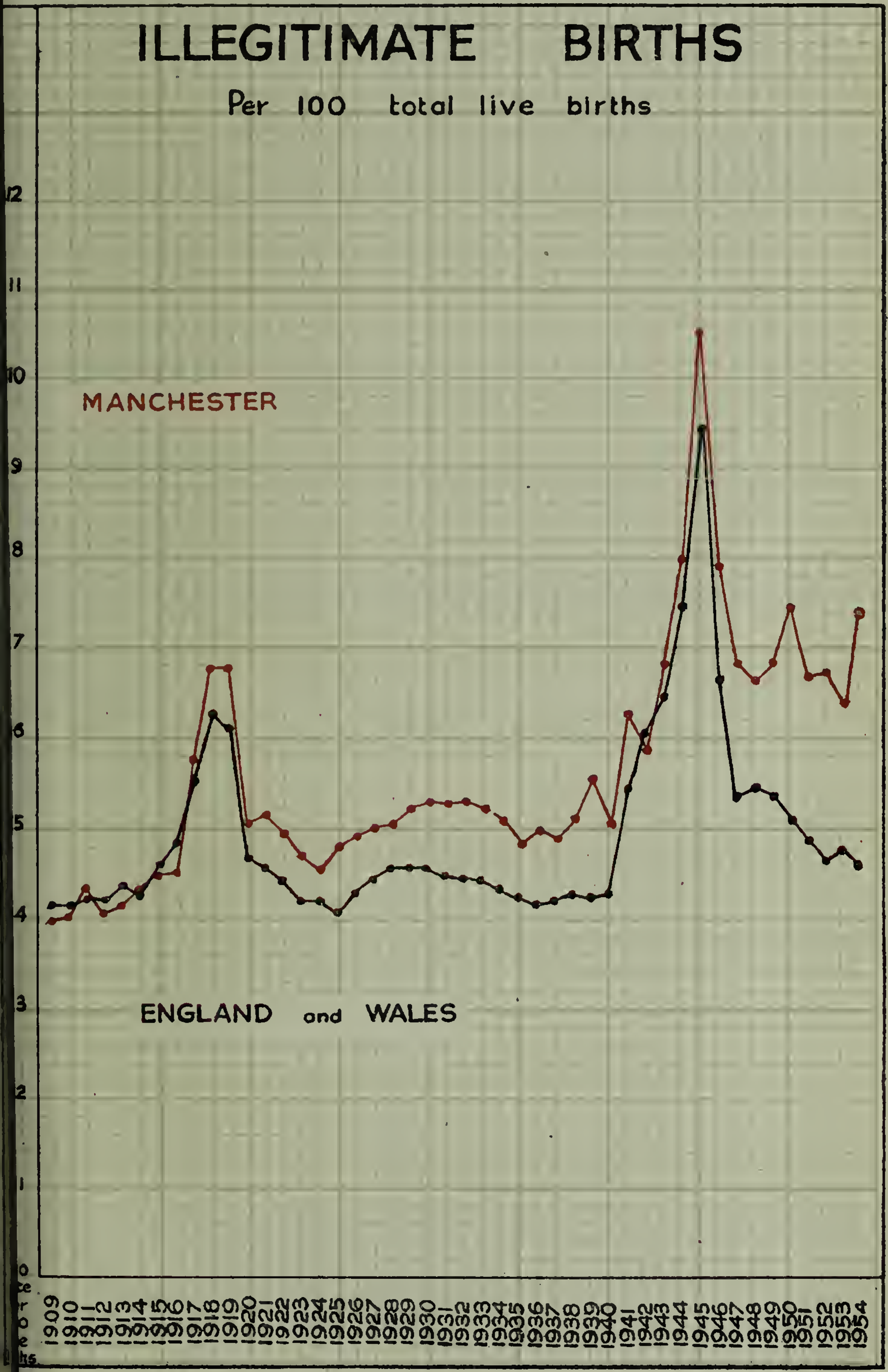


Deaths under one year of age from diarrhoea, congenital malformations, diseases of early infancy and other causes 1940–1954

Year	Diarrhoea		Congenital malformations		Injury at birth		Atelectasis		Others of early infancy		Immaturity unqualified		Other causes		Total deaths	Infant mortality rate per 1,000 live births
	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births	Deaths	Rate per 1,000 live births		
1940.. ..	70	6.7	92	8.9	25	2.4	16	1.5	56	5.4	146	14.1	324	31.2	729	70.2
1941.. ..	109	11.1	81	8.2	23	2.3	22	2.2	44	4.5	176	17.9	377	38.3	832	84.5
1942.. ..	88	8.6	86	8.4	20	1.9	19	1.8	43	4.2	187	18.2	220	21.4	663	64.5
1943.. ..	85	7.6	80	7.2	36	3.2	12	1.1	49	4.4	167	14.9	252	22.5	681	60.9
1944.. ..	72	5.9	82	6.7	28	2.3	18	1.5	49	4.0	164	13.4	241	19.8	654	53.6
1945.. ..	83	7.3	82	7.2	42	3.7	24	2.1	41	3.6	129	11.4	233	20.5	634	55.8
1946.. ..	167	12.0	118	8.4	40	2.9	47	3.4	38	2.7	193	13.8	287	20.5	890	63.7
1947.. ..	223	14.1	90	5.7	37	2.3	57	3.6	49	3.1	181	11.4	309	19.6	946	59.8
1948.. ..	57	4.1	72	5.2	45	3.3	49	3.6	22	1.6	104	7.5	232	16.8	581	42.1
1949.. ..	57	4.3	63	4.8	45	3.4	47	3.6	25	1.9	70	5.3	195	14.9	502	38.2
1950.. ..	38	3.0	67	5.4	43	3.5	58	4.7	41	3.3	81	6.5	143	11.5	471	37.9
1951.. ..	30	2.4	56	4.5	47	3.8	73	5.9	34	2.7	60	4.8	139	11.2	439	35.3
1952.. ..	19	1.5	77	6.2	43	3.5	65	5.3	26	2.1	86	7.0	108	8.7	424	34.3
1953.. ..	9	0.7	53	4.3	44	3.6	51	4.2	33	2.7	85	7.0	98	8.0	373	30.5
1954.. ..	11	0.9	81	6.8	44	3.7	53	4.5	37	3.1	52	4.4	71	6.1	349	29.5

Legitimate and illegitimate live births and deaths of infants under one year of age
From Registrar General's returns

Year	LIVE BIRTHS					DEATHS UNDER ONE YEAR OF AGE								
	Legitimate	Illegitimate	Total	Illegitimate percentage of total live births	Illegitimate percentage of total live births England & Wales	Number			Rate per 1,000 related live births					
						Legitimate	Illegitimate	Total	Legitimate	Illegitimate	Total	England and Wales		
												Legitimate	Illegitimate	Total
1915	15,956	740	16,696	4.43	4.45	1,959	182	2,141	122.78	245.95	128.24	105.4	208.3	109.7
1916	14,901	696	15,597	4.46	4.80	1,578	159	1,737	105.90	228.45	111.37	86.6	183.8	91.2
1917	12,195	742	12,937	5.74	5.56	1,262	176	1,438	103.48	237.20	111.15	90.3	201.1	96.5
1918	12,053	873	12,926	6.75	6.21	1,201	180	1,381	100.00	206.19	106.83	91.3	185.6	97.2
1919	12,758	928	13,686	6.78	6.05	1,175	160	1,333	91.94	172.41	97.40	83.7	172.8	89.1
1920	18,253	960	19,213	4.99	4.62	1,169	213	1,882	64.04	221.88	97.95	76.2	156.1	79.9
1921	16,647	902	17,549	5.14	4.52	1,542	171	1,713	92.63	189.58	97.61	79.2	158.3	82.8
1922	15,013	774	15,787	4 90	4.38	1,375	150	1,525	91.59	193.80	96.60	74.2	138.7	77.0
1923	14,677	711	15,388	4.62	4.16	1,243	117	1,360	84.69	164.56	88.35	66.6	131.8	69.4
1924	13,826	657	14,483	4.54	4.15	1,316	138	1,454	95.18	210.05	100.39	72.6	133.0	75.1
1925	13,493	669	14,162	4.72	4.07	1,251	113	1,364	92.72	168.91	96.31	72.5	135.6	75.0
1926	13,290	679	13,969	4.86	4.26	1,116	100	1,216	83.97	147.28	87.05	67.6	129.6	70.2
1927	12,388	648	13,036	4.97	4.35	1,032	90	1,122	83.31	138.89	86.07	67.4	119.8	69.7
1928	12,256	646	12,902	5.01	4.50	1,084	95	1,179	88.44	147.06	91.38	62.7	114.8	65.1
1929	12,380	678	13,058	5.19	4.55	1,144	128	1,272	92.41	188.79	97.41	71.9	125.9	74.4
1930	12,178	673	12,851	5.24	4.57	881	114	995	72.34	169.39	77.43	57.8	104.7	60.0
1931	11,694	643	12,337	5.21	4.44	956	93	1,049	81.75	144.64	85.03	64.3	110.7	66.3
1932	11,206	619	11,825	5.24	4.39	934	81	1,015	83.35	130.86	85.83	62.9	112.2	65.0
1933	10,582	574	11,156	5.15	4.37	769	65	834	72.67	113.24	74.76	61.7	107.5	63.7
1934	10,974	581	11,555	5.03	4.31	742	56	798	67.61	96.39	69.06	56.9	95.4	58.6
1935	10,842	537	11,379	4.72	4.19	757	52	809	69.82	96.83	71.09	55.5	89.5	56.9
1936	10,681	550	11,231	4.90	4.11	816	47	863	76.40	85.45	76.84	57.3	88.0	58.5
1937	10,268	518	10,786	4.80	4.15	770	53	823	74.99	102.32	76.30	56.3	88.1	57.6
1938	10,468	557	11,025	5.05	4.25	702	59	761	67.06	105.92	69.03	51.4	80.8	52.7
1939	9,807	571	10,378	5.50	4.19	587	47	634	59.85	82.31	61.09	48.6	89.8	50.4
1940	9,873	515	10,388	4.96	4.26	677	52	729	68.57	100.97	70.18	55.6	82.4	55.8
1941	9,239	610	9,849	6.19	5.36	767	65	832	83.02	106.56	84.47	58.8	82.3	58.8
1942	9,680	596	10,276	5.80	6.00	621	42	663	64.15	70.47	64.52	49.2	75.0	49.3
1943	10,431	754	11,185	6.74	6.38	625	56	681	59.92	74.27	60.88	47.6	71.4	49.0
1944	11,239	965	12,204	7.91	7.34	577	77	654	51.34	79.79	53.59	43.7	68.5	44.5
1945	10,175	1,187	11,362	10.45	9.33	557	77	634	54.74	64.87	55.80	44.1	64.8	47.0
1946	12,874	1,095	13,969	7.84	6.57	798	92	890	61.99	84.02	63.71	41.6	60.1	40.9
1947	14,760	1,070	15,830	6.76	5.29	859	87	946	58.20	81.31	59.76	40.4	58.0	41.8
1948	12,886	908	13,794	6.58	5.41	524	57	581	40.66	62.77	42.12	33.3	45.3	34.5
1949	12,243	886	13,129	6.75	5.34	461	41	502	37.65	46.28	38.24	31.7	44.8	32.7
1950	11,523	913	12,436	7.34	5.06	433	38	471	37.58	41.62	37.87	29.1	39.4	29.8
1951	11,616	822	12,438	6.58	4.84	407	32	439	35.03	38.93	35.29	29.2	38.5	29.6
1952	11,549	818	12,367	6.61	4.60	398	26	424	34.46	31.78	34.28	27.2	34.9	27.6
1953	11,450	768	12,218	6.29	4.75	352	21	373	30.74	27.34	30.53	26.5	33.0	26.8
1954	10,967	876	11,843	7.40	4.60	322	27	349	29.36	30.82	29.47	•	•	25.5



ILLEGITIMATE BIRTHS

Per 100 total live births

† WARDS	LIVE BIRTHS				DEATHS UNDER 1 YEAR OF AGE					
	Total	Legitimate	Illegitimate	% Illegitimate to total live births	Total	Legitimate	Illegitimate	Rate per 1000 live births	Rate per 1000 live births legitimate	Rate per 1000 live births illegitimate
CITY OF MANCHESTER ..	11843	10967	876	7·40	349	322	27	29·47	29·36	30·82
Alexandra Park	205	187	18	8·78	1	1	—	4·88	5·35	—
All Saints..	493	420	73	14·81	14	11	3	28·40	26·19	41·10
Ardwick	433	396	37	8·55	17	17	—	39·26	42·93	—
Barlow Moor	127	117	10	7·87	4	4	—	31·50	34·19	—
Beswick	356	341	15	4·21	15	14	1	42·13	41·06	66·67
Blackley	342	329	13	3·80	9	9	—	26·32	27·36	—
Bradford	360	335	25	6·94	15	14	1	41·67	41·79	40·00
Burnage	196	189	7	3·57	3	3	—	15·31	15·87	—
Cheetham	239	220	19	7·95	8	8	—	33·47	36·36	—
Chorlton-cum-Hardy	148	141	7	4·73	8	8	—	54·05	56·74	—
Collegiate Church	252	221	31	12·30	15	14	1	59·52	63·35	32·26
Crumpsall	293	281	12	4·10	1	1	—	3·41	3·56	—
Didsbury	204	201	3	1·47	2	2	—	9·80	9·95	—
Gorton North	324	308	16	4·94	9	9	—	27·78	29·22	—
Gorton South	245	234	11	4·49	8	8	—	32·65	34·19	—
Harpurhey	319	311	8	2·51	13	13	—	40·75	41·80	—
Levenshulme	225	209	16	7·11	6	6	—	26·67	28·71	—
Lightbowne	254	253	1	0·39	4	4	—	15·75	15·81	—
Longsight	225	208	17	7·56	7	7	—	31·11	33·65	—
Miles Platting	253	234	19	7·51	9	8	1	35·57	34·19	52·63
Moss Side East	487	407	80	16·43	21	19	2	43·12	46·68	25·00
Moss Side West	402	345	57	14·18	10	10	—	24·88	28·99	—
Moston	308	299	9	2·92	7	7	—	22·73	23·41	—
New Cross	311	281	30	9·65	9	8	1	28·94	28·47	33·33
Newton Heath	271	254	17	6·27	6	6	—	22·14	23·62	—
Newtown	441	425	16	3·63	16	16	—	36·28	37·65	—
Northenden	491	477	14	2·85	7	5	2	14·26	10·48	142·86
Old Moat	190	176	14	7·37	5	3	2	26·32	17·05	142·86
Openshaw..	331	318	13	3·93	13	13	—	39·27	40·88	—
Rusholme	221	208	13	5·88	5	5	—	22·62	24·04	—
St. George's	416	363	53	12·74	14	11	3	33·65	30·30	56·60
St. Luke's	477	395	82	17·19	16	13	3	33·54	32·91	36·59
St. Mark's	358	330	28	7·81	11	7	4	30·73	21·21	142·86
St. Peter's	139	117	22	15·83	5	4	1	35·97	34·18	45·45
Withington	201	187	14	6·97	5	4	1	24·88	21·39	71·43
Wythenshawe	1306	1250	56	4·29	31	30	1	23·74	24·00	17·86

† The municipal wards are shown as they were constituted at 1st January, 1954

Still-births, neo-natal deaths, deaths at four weeks to one year of age, and infant death rate, 1935-1954

Year	Total live and still-births	STILL-BIRTHS		NEO-NATAL DEATHS		DEATHS, 4 WEEKS—1 YEAR		DEATHS UNDER 1 YEAR AND STILL-BIRTHS		Infant death rate per 1,000 live births
		Number of still-births	Rate per 1,000 live and still-births	Number of neo-natal deaths, 0–4 weeks	Rate per 1,000 total live births	Number of deaths, 4 weeks–1 year	Rate per 1,000 total live births	Number of deaths under 1 year and still-births	Rate per 1,000 total live and still-births	
1935	11,925	546	45·79	381	33·48	428	37·61	1,355	113·63	71·09
1936	11,762	531	45·15	385	34·28	478	42·56	1,394	118·52	76·84
1937	11,254	468	41·59	381	35·32	442	40·98	1,291	114·71	76·30
1938	11,532	507	43·96	351	31·84	410	37·19	1,268	109·95	69·03
1939	10,870	492	45·26	321	30·93	313	30·16	1,126	103·59	61·09
1940	10,866	478	43·99	295	28·40	434	41·78	1,207	111·08	70·18
1941	10,249	400	39·03	292	29·65	540	54·82	1,232	120·21	84·47
1942	10,719	443	41·33	304	29·58	359	34·94	1,106	103·18	64·52
1943	11,591	406	35·02	306	27·36	375	33·52	1,087	93·77	60·88
1944	12,571	367	29·19	315	25·81	339	27·78	1,021	81·22	53·59
1945	11,734	372	31·70	311	27·37	323	28·43	1,006	85·73	55·80
1946 .. .	14,414	445	30·87	474	33·93	416	29·78	1,335	92·62	63·71
1947	16,257	427	26·27	466	29·44	480	30·32	1,380	84·89	59·76
1948	14,170	376	26·53	274	19·85	307	22·26	957	67·54	42·12
1949	13,460	331	24·59	242	18·43	260	19·80	833	61·88	38·24
1950	12,769	333	26·08	263	21·15	208	16·72	804	62·96	37·87
1951	12,757	319	25·01	251	20·18	188	15·11	758	59·42	35·29
1952	12,716	349	27·45	269	21·75	155	12·53	773	60·78	34·28
1953	12,573	355	28·24	255	20·87	118	9·66	728	57·90	30·53
1954	12,232	389	31·80	237	20·01	112	9·46	738	60·33	29·47

Abstract of Registrar General's He

YEAR	POPULATION	DEATH RATE			BIRTH RATE			INFANT DEATH RATE			ALL PUERPERAL CAUSES			PUERPERAL AND POST ABORTIVE SEPSIS			OTHER PUERPERAL CAUSES			ALL FORMS OF TUBERCULOSIS			PULMONARY TUBERCULOSIS			OTHER FORMS OF TUBERCULOSIS			SMALLPOX			TYPHOID AND PARATYPHOID FEVERS			SCARLET FEVER			
		Number of deaths	Per 1000 pop'n	England and Wales	Number of Births	Per 1000 pop'n	England and Wales	Number of deaths	Per 1000 births	England and Wales	Number of deaths	Rate per 1000 births	England and Wales	Number of deaths	Rate per 1000 births	England and Wales	Number of deaths	Rate per 1000 births	England and Wales	Notified	Deaths	Rate per 1000 pop'n	Notified	Deaths	Rate per 1000 pop'n	Notified	Deaths	Rate per 1000 pop'n	Notified	Deaths	Rate per 1000 pop'n	Notified	Deaths	Rate per 1000 pop'n	Notified	Deaths	Rate per 1000 pop'n	Not
1915	700319	12236	17·47	15·7	16696	23·84	21·8	2141	128	109	74	4·43	4·18	31	1·86	1·47	43	2·57	2·71	3050	1639	2·34	2213	1342	1·92	837	297	0·42	—	—	—	174	37	0·053	2922	82	0·117	548
1916	B 742690 D 682608	11025	16·15	14·3	15597	21·00	20·9	1737	111	91	64	4·10	4·12	21	1·35	1·38	43	2·76	2·74	3434	1587	2·32	2549	1258	1·84	885	329	0·48	—	—	—	78	23	0·034	1185	33	0·048	614
1917	B 735873 D 660143	10276	15·57	14·2	12937	17·58	18·1	1438	111	96	45	3·48	3·89	16	1·24	1·31	29	2·24	2·58	3129	1569	2·38	2247	1228	1·86	882	341	0·52	—	—	—	86	10	0·151	829	15	0·023	581
1918	B 746011 D 665807	12227	18·36	17·3	12926	17·33	17·6	1381	107	97	42	3·25	3·79	15	1·16	1·28	27	2·09	2·51	2544	1471	2·21	1846	1196	1·89	698	275	0·41	—	—	—	68	9	0·014	779	21	0·032	518
1919	B 771973 D 741068	10678	14·41	14·0	13686	17·73	18·5	1333	97	89	67	4·89	4·37	33	2·41	1·67	34	2·48	2·70	2025	1206	1·63	1591	986	1·33	434	220	0·30	14	1	0·001	90	19	0·026	1758	26	0·035	471
1920	738000	10300	13·96	12·4	19213	26·03	25·4	1882	98	79	67	3·49	4·33	45	2·34	1·81	22	1·15	2·52	2044	1101	1·49	1507	899	1·22	537	202	0·27	4	—	—	54	11	0·015	3829	46	0·062	914
1921	744000	10111	13·59	12·1	17549	23·59	22·4	1713	98	82	64	3·65	3·91	34	1·94	1·38	30	1·71	2·53	2174	1230	1·65	1644	981	1·32	530	249	0·33	—	—	—	90	12	0·016	5419	59	0·079	1045
1922	748500	10653	14·23	12·8	15787	21·09	20·6	1525	97	77	59	3·74	3·81	31	1·96	1·38	28	1·77	2·43	2081	1199	1·60	1486	954	1·27	595	245	0·33	4	—	—	38	5	0·067	3682	61	0·081	839
1923	752100	10078	13·40	11·6	15388	20·46	19·7	1360	88	69	58	3·77	3·81	20	1·30	1·30	38	2·47	2·51	2228	1154	1·53	1496	936	1·24	732	218	0·29	—	—	—	50	9	0·012	1841	31	0·041	549
1924	755000	10563	13·99	12·2	14483	19·18	18·8	1454	100	75	71	4·90	3·90	31	2·14	1·39	40	2·76	2·51	2200	1137	1·51	1568	910	1·21	632	227	0·30	—	—	—	106	13	0·017	1799	34	0·045	574
1925	755800	10960	14·50	12·2	14162	18·74	18·3	1364	96	75	51	3·60	4·08	26	1·84	1·56	25	1·77	2·52	2134	1193	1·58	1511	1005	1·33	623	187	0·25	—	—	—	69	10	0·013	2872	59	0·078	1037
1926	752000	10077	13·40	11·6	13969	18·58	17·8	1216	87	70	68	4·87	4·12	30	2·15	1·60	38	2·72	2·52	1810	1082	1·44	1352	911	1·21	458	171	0·23	2	—	—	33	10	0·013	2282	25	0·033	1153
1927	751900	10532	14·01	12·3	13036	17·34	16·7	1122	86	69	65	4·99	4·11	27	2·07	1·57	38	2·92	2·54	1889	1060	1·41	1388	894	1·19	501	166	0·22	36	—	—	24	3	0·004	1937	20	0·027	1318
1928	755900	9989	13·21	11·7	12902	17·07	16·7	1179	91	65	59	4·57	4·42	27	2·09	1·79	32	2·48	2·63	1895	998	1·32	1409	852	1·13	486	146	0·19	68	—	—	37	4	0·005	2168	13	0·172	1196
1929	746500	11839	15·86	13·4	13058	17·49	16·3	1272	97	74	61	4·67	4·33	24	1·84	1·80	37	2·83	2·53	1751	1078	1·44	1373	931	1·25	378	147	0·20	8	1	0·001	49	6	0·008	2375	9	0·012	895
1930	757900	9791	12·92	11·4	12851	16·96	16·3	995	77	60	64	4·74	3·40	34	2·52	1·92	30	2·22	2·48	1709	1061	1·40	1263	898	1·18	446	163	0·22	2	—	—	42	8	0·011	3771	10	0·013	1059
1931	772090	10645	13·79	12·3	12337	15·98	15·8	1049	85	66	40	†3·09	†3·94	18	†1·39	†1·59	22	†1·70	†2·35	1710	994	1·29	1229	861	1·12	481	133	0·17	—	—	—	27	4	0·005	2973	11	0·014	735
1932	763000	10076	13·21	12·0	11825	15·50	15·3	1015	86	65	47	3·79	4·04	20	1·61	1·55	27	2·18	2·49	1449	885	1·16	1061	766	1·00	388	119	0·16	—	—	—	47	3	0·004	2319	17	0·022	1069
1933	758150	10345	13·65	12·3	11156	14·71	14·4	834	75	64	52	4·43	4·32	20	1·70	1·75	32	2·73	2·57	1357	891	1·18	1053	791	1·04	304	100	0·13	—	—	—	15	2	0·003	1804	14	0·018	1019
1934	754600	9530	12·63	11·8	11555	15·31	14·8	798	69	59	48	3·97	4·42	16	1·32	1·95	32	2·65	2·47	1329	881	1·17	1026	761	1·01	303	120	0·16	—	—	—	16	2	0·003	2151	14	0·019	1276
1935	748100	10120	13·53	11·7	11379	15·21	14·7	809	71	57	44	3·69	3·93	23	1·93	1·61	21	1·76	2·32	1251	808	1·08	957	714	0·95	294	94	0·13	—	—	—	25	4	0·005	2849	13	0·017	1302
1936	744000	10207	13·72	12·1	11231	15·10	14·8	863	77	59	52	4·42	3·65	16	1·36	1·34	36	3·06	2·31	1226	776	1·04	937	671	0·90	289	105	0·14	—	—	—	19	2	0·003	2463	6	0·008	1649
1937	736500	10216	13·87	12·4	10786	14·64	14·9	823	76	58	46	4·09	3·13	13	1·16	0·94	33	2·93	2·19	1359	789	1·07	1001	674	0·92	358	115	0·16	—	—	—	13	1	0·001	2656	7	0·009	1883
1938	732900	9243	12·61	11·6	11025	15·04	15·1	761	69	53	46	3·98	2·97	17	1·47	0·86	29	2·51	2·11	1189	726	0·99	907	627	0·86	282	99	0·14	—	—	—	7	—	—	2487	8	0·011	1591
1939	B 727600 D 702500	9405	13·39	12·1	10378	14·26	15·0	634	61	50	31	2·85	2·82	8	0·73	0·74	23	2·12	2·08	1114	701	1·00	849	601	0·86	265	100	0·14	—	—	—	30	1	0·001	1332	1	0·001	1031
1940	622300	11191	17·98	14·3	10388	16·69	14·6	729	70	55	24	2·21	2·16*	9	0·83	0·52*	15	1·38	1·64*	1182	769	1·24	943	678	1·09	239	91	0·15	—	—	—	72	1	0·002	768	1	0·002	917
1941	601840	10016	16·64	12·9	9849	16·36	14·2	832	84	59	26	2·53	2·23*	10	0·97	0·48*	16	1·56	1·75*	1226	794	1·32	968	679	1·13	258	115	0·19	—	—	—	69	—	—	885	2	0·003	1009
1942	601900	8861	14·72	11·6	10276	17·07	15·8	663	65	49	25	2·33	2·01*	7	0·65	0·42*	18	1·68	1·59*	1128	672	1·12	894	592	0·99	234	80	0·13	—	—	—	11	2	0·003	1869	1	0·002	814
1943	599300	9290	15·50	12·1	11185	18·66	16·5	681	61	49	27	2·33	2·29	12	1·04	0·73	15	1·29	1·56	1172	639	1·07	900	546	0·91	272	93	0·16	—	—	—	20	1	0·002	1992	1	0·002	791
1944	614760	8731	14·20	11·6	12204	19·85	17·6	654	54	46	23	1·83	1·93	8	0·64	0·59	15	1·19	1·34	1051	559	0·91	840	491	0·80	211	68	0·11	—	—	—	4	—	—	1539	—	—	266
1945	623480	8985	14·41	11·4	11362	18·22	16·1	634	56	46	12	1·02	1·79	3	0·25	0·49	9	0·77	1·30	1113	577	0·93	913	496	0·80	200	81	0·13	—	—	—	9	1	0·001	1140	—	—	302
1946	668660	9038	13·52	11·5	13969	20·89	19·1	890	64	43	23	1·60	1·43	5	0·35	0·31	18	1·25	1·12	973	527	0·79	805	460	0·69	168	67	0·10	—	—	—	18	1	0·001	775	—	—	259
1947	685560	9453	13·79	12·0	15830	23·09	20·5	946	60	41	25	1·54	1·17	9	0·55	0·26	16	0·99	0·91	920	514	0·75	786	450	0·66	134	64	0·09	—	—	—	4	—	—	939	—	—	80
1948	693000	8501	12·27	10·8	13794	19·90	17·9	581	42	34	11	0·78	1·02	1	0·07	0·24	10	0·71	0·78	1004	526	0·76	863	477	0·69	141	49	0·07	—	—	—	4	1	0·001	1222	—	—	43
1949	699600	9036	12·91	11·7	13129	18·77	16·7	502	38	32	16	1·19	0·98	6	0·45	0·22	10	0·74	0·76	1053	456	0·65	899	418	0·60	154	38	0·05	—	—	—	15	—	—	1594	—	—	22
1950	704500	8999	12·77	11·6	12436	17·65	15·8	471	38	30	10	0·78	0·86	1	0·08	0·12	9	0·70	0·74	869	458	0·65	737	411	0·58	132	47	0·07	—	—	—	2	1	0·001	1447	—	—	22
1951	699900	9676	13·82	12·5	12438	17·77	15·5	439	35	30	19	1·49	0·79	5	0·39	0·19	14	1·10	0·60	816	357	0·51	711	318	0·45	105	39	0·06	—	—	—	15	—	—	970	—	—	10
1952	705400	8576	12·16	11·3	12367	17·53	15·3	424	34	28	9	0·71	0·72	2	0·16	0·16	7	0·55	0·56	813	293	0·41	717	269	0·38	96	24	0·03	—	—	—	19	—	—	1121	—	—	7
1953	701800	8638	12·31	11·4	12218	17·41	15·5	373	31	27	10	0·80	0·76	—	—	0·16	10	0·80	0·60	835	216	0·31	742	198	0·28	93	18	0·03	—	—	—	2	—	—	968	—	—	7
1954	699000	8525	12·20	11·3	11843	16·94	15·2	349	29	25	6	0·49	0·69	—	—	×	6	0·49	×	779	209	0·30	672	188	0·27	107	21	0·03	—	—	—	1	—	—	767	1	0·001	—

B Population for calculating birth-rates.
D Population for calculating death-rates.

* Excluding abortion.
† From 1931 rates for maternal mortality are based on live and still births.
× Figures for 1954 not available.

From 1944 the number of notifications of infectious diseases refers to true cases only.

s Health Reports, 1915 to 1954

DIPHTHERIA			MEASLES			WHOOPING COUGH			ACUTE POLIOMYELITIS AND POLIO-ENCEPHALITIS			MENINGOCOCCAL INFECTIONS			PNEUMONIA—ALL FORMS			INFLUENZA		BRONCHITIS		DIARRHŒA (under 2 years)		MALIGNANT NEOPLASMS		HEART DISEASE		OTHER DISEASES OF CIRCULATORY SYSTEM		NEPHRITIS AND NEPHROSIS		CONGENITAL MALFORMATIONS AND DEBILITY, ETC., INCLUDING PREMATURE BIRTH		VIOLENCE (Apart from suicide)		SUICIDE		YEAR
Notified	Deaths	Rate per 1000 pop'n	Notified	Deaths	Rate per 1000 pop'n	Notified	Deaths	Rate per 1000 pop'n	Notified	Deaths	Rate per 1,000 pop'n	Notified	Deaths	Rate per 1,000 pop'n	Notified	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1,000 pop'n	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1000 pop'n	Deaths	Rate per 1000 pop'n	
548	103	0·147	—	453	0·65	—	70	0·10	8	1	0.001	15	12	0·02	—	1141	1·63	142	0·20	1305	1·86	479	0·68	784	1·12	1020	1·46	—	—	359	0·51	668	0·95	399	0·57	44	0·06	1915
614	64	0·094	9230	184	0·27	—	304	0·45	9	3	0·004	7	7	0·01	—	991	1·45	140	0·21	1232	1·80	305	0·45	805	1·18	872	1·28	—	—	331	0·48	523	0·77	424	0·62	26	0·04	1916
581	57	0·086	10613	293	0·44	—	53	0·08	14	1	0·002	7	5	0·01	—	984	1·49	105	0·16	1132	1·71	282	0·43	786	1·19	820	1·24	—	—	304	0·46	478	0.72	390	0·59	33	0·05	1917
518	55	0·083	8448	167	0·25	5738	332	0·50	10	3	0·005	5	3	0·01	—	1500	2·25	2042	3·07	1040	1·56	139	0·21	823	1·24	773	1·16	—	—	271	0·41	470	0·71	295	0·44	37	0·06	1918
471	35	0·047	8420	106	0·14	1000	39	0·05	12	—	—	11	11	0·01	1226	1027	1·39	1088	1·47	1246	1·68	162	0·22	868	1·17	869	1·17	—	—	262	0·35	504	0·68	299	0·40	51	0·07	1919
914	71	0·096	10635	210	0·28	2290	86	0·12	8	2	0·003	11	8	0·01	825	1019	1·38	228	0·31	1177	1·59	237	0·32	948	1·28	902	1·22	—	—	270	0·37	689	0·93	305	0·41	43	0·06	1920
1045	90	0·121	1135	4	0·01	4415	170	0·23	8	1	0·001	3	8	0·01	1796	995	1·34	204	0·27	1038	1·40	375	0·50	953	1·28	1002	1·35	236	0·32	258	0·35	581	0·78	282	0·38	63	0·08	1921
839	79	0·106	19614	358	0·48	2160	99	0·13	6	2	0·003	8	8	0·01	2755	1149	1·54	387	0·52	1233	1·65	190	0·25	964	1·29	1006	1·34	236	0·32	282	0·38	513	0·69	272	0·36	76	0·10	1922
549	47	0·062	3481	84	0·11	3804	186	0·25	3	2	0·003	4	8	0·01	2493	1097	1·46	279	0·37	1061	1·41	209	0·28	1058	1·41	1022	1·36	274	0·36	250	0·33	440	0·59	252	0·34	70	0·09	1923
574	61	0·081	18349	373	0·49	1706	112	0·15	8	2	0·003	13	13	0·02	2650	1106	1·46	334	0·44	1153	1·53	186	0·25	1057	1·40	1066	1·41	368	0·49	260	0·34	511	0·68	257	0·34	55	0·07	1924
1037	99	0·131	7941	128	0·17	3333	211	0·28	14	6	0·008	12	12	0·02	2551	1060	1·40	259	0·34	1279	1·69	213	0·28	1060	1·40	1140	1·51	471	0·62	244	0·32	484	0·64	288	0·38	87	0·12	1925
1153	102	0·136	10953	162	0·22	2094	63	0·08	14	3	0·004	17	9	0·01	2189	873	1·16	213	0·28	996	1·32	258	0·34	1122	1·49	1102	1·47	428	0·57	239	0·32	446	0·59	268	0·36	64	0·09	1926
1318	91	0·121	13987	164	0·22	2244	125	0·17	12	4	0·005	10	9	0·01	2950	1053	1·40	450	0·60	1041	1·38	181	0·24	1089	1·45	1201	1·60	630	0·84	242	0·32	414	0·55	250	0·33	94	0·13	1927
1196	94	0·124	7141	127	0·17	3189	93	0·12	11	4	0·005	7	13	0·02	2539	928	1·23	177	0·23	793	1·05	240	0·33	1130	1·50	1268	1·68	682	0·90	303	0·40	418	0·55	274	0·36	90	0·12	1928
895	56	0·075	9512	68	0·09	4037	222	0·30	6	3	0·004	20	14	0·02	3140	1300	1·74	697	0·93	1002	1·34	240	0·32	1168	1·56	1697	2·27	528	0·71	279	0·37	444	0·59	312	0·42	81	0·11	1929
1059	57	0·075	10738	147	0·19	1388	36	0·05	4	—	—	24	22	0·03	2349	827	1·09	128	0·17	647	0·85	166	0·22	1149	1·52	1523	2·01	476	0·63	295	0·39	475	0·63	317	0·42	108	0·14	1930
735	60	0·078	7771	63	0·08	3150	90	0·12	6	—	—	45	30	0·04	2485	981	1·27	337	0·44	826	1·07	172	0·22	1259	1·63	1738	2·25	517	0·67	300	0·39	442	0·57	302	0·39	95	0·12	1931
1069	81	0·106	12238	129	0·17	2280	84	0·11	7	1	0·001	37	21	0·03	2368	882	1·16	184	0·24	556	0·73	125	0·16	1287	1·69	1761	2·31	496	0·65	292	0·38	439	0·58	328	0·43	116	0·15	1932
1019	87	0·115	6350	48	0·06	2230	49	0·06	12	5	0·007	53	22	0·03	2527	824	1·09	532	0·70	579	0·76	102	0·13	1194	1·57	2090	2·76	502	0·66	269	0·35	409	0·54	335	0·44	100	0·13	1933
1276	83	0·110	11383	96	0·13	1565	37	0·05	17	1	0·001	45	22	0·03	1674	687	0·91	92	0·12	422	0·56	113	0·15	1273	1·69	1905	2·52	471	0·62	282	0·37	417	0·55	303	0·40	96	0·13	1934
1302	60	0·080	9907	99	0·13	1632	50	0·07	8	1	0·001	59	28	0·04	2480	765	1·02	222	0·30	485	0·65	74	0·10	1338	1·79	1979	2·65	373	0·50	258	0·34	444	0·59	286	0·38	99	0·13	1935
1649	91	0·122	8807	114	0·15	1457	52	0·07	32	1	0·001	72	38	0·05	2213	781	1·05	125	0·17	534	0·72	57	0·08	1256	1·69	2224	2·99	466	0·63	270	0·36	444	0·60	318	0·43	93	0·13	1936
1883	89	0·121	6550	44	0·06	1403	54	0·07	2	3	0·004	61	21	0·03	2427	742	1·01	308	0·42	475	0·64	64	0·09	1284	1·74	2315	3·14	440	0·60	261	0·35	419	0·57	307	0·42	70	0·10	1937
1591	55	0·075	9949	60	0·08	1075	13	0·02	13	—	—	64	19	0·03	1646	589	0·80	84	0·11	347	0·47	75	0·10	1316	1·80	2083	2·84	436	0·59	230	0·31	386	0·53	295	0·40	88	0·12	1938
1031	36	0·051	574	—	—	1406	30	0·04	26	2	0·003	49	7	0·01	1324	411	0·59	160	0·23	427	0·61	62	0·09	1265	1·80	2311	3·29	470	0·67	258	0·37	357	0·51	376	0·54	91	0·13	1939
917	47	0·076	14844	28	0·04	670	7	0·01	8	2	0·003	223	51	0·08	1785	551	0·89	198	0·32	1733	2·78	75	0·12	1242	2·00	2023	3·25	286	0·46	274	0·44	350	0·56	692	1·11	71	0·11	1940
1009	46	0·076	3869	20	0·03	4715	65	0·11	33	3	0·005	286	38	0·06	1809	548	0·91	105	0·17	1034	1·72	113	0·19	1259	2·09	1883	3·13	214	0·36	235	0·39	372	0·62	660	1·10	57	0·09	1941
814	27	0·045	10468	17	0·03	1103	16	0·03	8	1	0·002	200	20	0·03	1402	364	0·60	51	0·09	823	1·37	93	0·15	1256	2·09	1938	3·22	238	0·40	233	0·39	379	0·63	297	0·49	50	0·08	1942
791	30	0·050	4419	12	0·02	3277	42	0·07	14	4	0·007	107	14	0·02	1374	468	0·78	231	0·38	971	1·62	88	0·15	1280	2·14	1833	3·06	289	0·48	222	0·37	356	0·59	292	0·49	60	0·10	1943
266	6	0·010	6736	9	0·01	2003	26	0·04	—	1	0·002	28	8	0·01	979	357	0·58	50	0·08	791	1·29	73	0·12	1286	2·09	1950	3·17	280	0·46	226	0·37	367	0·60	280	0·46	65	0·11	1944
302	14	0·022	5596	8	0·01	1835	25	0·04	6	—	—	44	11	0·02	857	365	0·59	44	0·07	984	1·58	85	0·14	1297	2·08	1824	2·93	307	0·49	214	0·34	332	0·53	233	0·37	74	0·12	1945
259	11	0·016	3800	3	0·00	2265	32	0·05	6	1	0·001	33	10	0·01	1040	399	0·60	105	0·16	893	1·34	169	0·25	1285	1·92	1882	2·81	377	0·56	211	0·32	454	0·68	237	0·35	54	0·08	1946
80	3	0·001	9008	20	0·03	2308	18	0·03	123	11	0·016	23	8	0·01	770	452	0·66	36	0·05	880	1·28	229	0·33	1407	2·05	2146	3·13	402	0·59	224	0·33	437	0·64	227	0·33	67	0·10	1947
43	1	0·001	10650	17	0·02	2612	19	0·03	25	4	0·006	20	8	0·01	825	353	0·51	16	0·02	801	1·16	58	0·08	1386	2·00	1917	2·77	406	0·59	196	0·28	312	0·45	206	0·29	77	0·11	1948
22	—	—	6485	7	0·01	2749	29	0·04	35	8	0·012	29	8	0·01	783	396	0·57	108	0·15	943	1·35	60	0·09	1398	2·00	2206	3·15	430	0·61	167	0·24	272	0·39	166	0·24	88	0·13	1949
22	3	0·004	9798	9	0·01	4187	19	0·03	98	5	0·007	23	5	0·01	696	331	0·47	61	0·09	837	1·19	38	0·05	1405	1·99	2585	3·68	328	0·47	91	0·13	309	0·44	208	0·30	67	0·10	1950
10	—	—	8953	1	0·00	2255	3	0·00	23	2	0·003	27	5	0·01	709	412	0·59	257	0·37	1012	1·45	30	0·04	1507	2·15	2766	3·95	339	0·48	81	0·12	287	0·41	218	0·32	81	0·12	1951
7	1	0·001	10035	6	0·01	2635	8	0·01	35	1	0·001	23	2	0·00	521	336	0·48	24	0·03	741	1·05	22	0·03	1536	2·18	2491	3·54	343	0·49	99	0·14	300	0·42	215	0·30	75	0·11	1952
7	1	0·001	6798	2	0·00	2112	4	0·01	11	—	—	33	6	0·01	576	338	0·48	102	0·15	791	1·13	9	0·01	1519	2·16	2550	3·63	322	0·46	65	0·09	284	0·40	232	0·33	100	0·14	1953
—	—	—	9844	3	0·00	1642	4	0·01	13	2	0·003	29	2	0·00	384	317	0·45	32	0·05	761	1·09	12	0·02	1568	2·21	2517	3·60	332	0·47	53	0·08	294	0·42	186	0·27	86	0·12	1954

INFECTIOUS DISEASES AND EPIDEMIOLOGY

he following figures indicate the causes of deaths from the more common ses :—

	Years	
	1949–53 average	1954
les	5	3
ping cough	13	4
et fever	—	1
theria	1	—
enza	110	32
monia (all forms)	363	317
ic fever	—	—
hoeal disease	32	39
onary tuberculosis	323	188

ltations

hree consultation visits were made during the year by medical officers e Department, at the request of medical practitioners in the City, in ction with the diagnosis of cases of infectious disease in which the nature illness was in doubt.

pox

o case of smallpox occurred in Manchester during the year.

ation

will be seen that over the last two years there has been a definite tendency e acceptance rates to increase in the under 1 year age group. Some part s improvement is no doubt due to the fact that, early in 1953, arrange- were made for babies to be vaccinated at child welfare clinics. This gement has worked smoothly and well since its inception and has had lded effect, also, of increasing the number of primary vaccinations of en in 1–4 age group, compared with the years 1951 and 1952. The ance rate for 1954 is all the more gratifying when one considers that in and 1953 outbreaks of smallpox occurred in some of the surrounding ts of the City which undoubtedly had the effect of stimulating the demand ccination and re-vaccination in those areas at the time. When considering llowing vaccination tables, attention is drawn to the fact that a delay imes occurs in the submission of completed record forms by general tioners ; consequently record forms received to 26th February, 1955, een taken into account of such vaccinations and re-vaccinations performed year ended 31st December, 1954.

ant vaccination record forms received from general practitioners and welfare clinics were as follows:—

General practitioners		Child welfare clinics	
ary	2,057	Primary	3,376
sceptible	71	Insusceptible	304
Total	2,128	Total	3,680

The numbers of children successfully vaccinated in each of the 10 years, with percentages, are as follows :—

Year	Numbers of persons vaccinated					Numbers of live births	Percen vaccin. under to live
	under 1 year	1—4 years	5—14 years	15 years and over	Totals		
1945 ..	7,300	114			7,414	11,362	64·
1946 ..	8,994	362			9,356	13,969	64·
1947 ..	9,856	302			10,158	15,830	62·
1948 ..	4,916	173			5,089	13,794	35·
1949 ..	2,957	2,031	70	383	5,441	13,129	22·
1950 ..	5,409	2,668	846	685	9,608	12,436	43·
1951 ..	4,803	587	311	1,937	7,638	12,438	38·
1952 ..	4,419	599	382	2,106	7,506	12,367	35·
1953 ..	5,827	1,227	1,328	3,776	12,158	12,218	47·
1954 ..	5,627	704	120	427	6,878	11,843	47·

NOTE.—Percentages vaccinated under 1 year to live births for the years 1945 to 1948 were expressed in p reports as percentages of the uncorrected live births.

Diphtheria

It is pleasing to report this year that, for the first time since dipht became a notifiable disease, no confirmed case occurred in the City. may lead to the impression that the disease has disappeared, but such a of affairs can only be maintained as long as there is a high level of imm in the child population. The fall of the disease has been so pronounced ir City in recent years that parents are apt to become apathetic, and to ig the constant pressure by propaganda on the need for, and the protective of, immunization. 29 persons notified as having diphtheria, or susp diphtheria, were admitted to the infectious disease hospital for observ and treatment but in no instance was the diagnosis confirmed.

The following figures show the number of cases notified and accept diphtheria each year for the last ten years.

Year	1945	1946	1947	1948	1949	1950	1951	1952	1953
Number of cases	302	259	80	43	22	22	10	7	7

Mortality

The case mortality in 1954 was, therefore, *nil*.

Cases of notifiable infectious diseases other than tuberculosis classified in wards of the City

Estimated population		Dysentery	Typhoid fever	Paratyphoid fevers	Other food poisoning	Scarlet fever	Diphtheria	Erysipelas	Whooping cough	Measles	German measles	Meningococcal infections	Acute poliomyelitis		Encephalitis		Pneumonia				Smallpox	Malaria (contracted in England & Wales)	Ophthalmia neonatorum	Pemphigus neonatorum	Puerperal pyrexia	Total cases	Rates per 1,000 population in wards
													Paralytic	Non-paralytic	Acute infective	Post-infectious	Lobar	Broncho	Influenzal	Other							
699000	**Total for the City**	**467**	**1**	—	**94**	**767**	—	**46**	**1642**	**9844**	**441**	**29**	**9**	**4**	—	—	**250**	**57**	**18**	**59**	—	—	**60**	**8**	**450**	**14246**	**20·38**
	WARDS																										
21552	ALEXANDRA PARK	25	—	—	3	3	—	1	30	202	12	—	—	—	—	—	4	1	—	—	—	—	1	—	11	293	13·60
18444	ALL SAINTS	5	—	—	—	22	—	2	22	376	19	1	1	1	—	—	8	2	—	1	—	—	4	1	24	489	26·51
17618	ARDWICK	15	—	—	2	11	—	—	33	374	8	3	—	—	—	—	5	—	—	1	—	—	2	—	24	478	27·13
15340	BARLOW MOOR	7	—	—	3	29	—	—	26	198	19	—	1	—	—	—	4	1	1	—	—	—	2	—	2	293	19·10
19391	BESWICK	2	—	—	—	5	—	—	54	339	6	2	—	—	—	—	9	1	—	—	—	—	—	1	8	427	22·02
21281	BLACKLEY	24	—	—	2	9	—	—	55	187	4	1	—	—	—	—	2	—	—	—	—	—	—	—	7	291	13·67
22762	BRADFORD	8	—	—	3	11	—	—	53	249	5	—	—	—	—	—	14	2	—	1	—	—	—	1	10	357	15·68
21946	BURNAGE	7	—	—	—	13	—	—	11	137	4	—	—	—	—	—	2	3	—	—	—	—	—	—	4	181	8·25
14079	CHEETHAM	13	—	—	6	9	—	1	48	156	10	2	—	—	—	—	3	—	—	2	—	—	—	—	3	253	17·97
19870	CHORLTON-CUM-HARDY	1	—	—	—	12	—	1	10	178	6	—	1	—	—	—	—	—	—	2	—	—	5	—	8	224	11·21
13520	COLLEGIATE CHURCH	17	—	—	8	7	—	2	91	123	6	—	—	—	—	—	—	2	—	6	—	—	1	1	4	268	19·82
22240	CRUMPSALL	11	—	—	10	23	—	—	39	189	6	1	—	—	—	—	16	1	3	4	—	—	—	—	9	312	14·03
17430	DIDSBURY	17	—	—	—	18	—	2	25	149	21	—	—	—	—	—	1	—	—	—	—	—	—	—	4	237	13·60
22856	GORTON NORTH	—	—	—	3	20	—	4	10	298	6	—	—	—	—	—	5	3	—	2	—	—	2	—	10	363	15·88
17402	GORTON SOUTH	4	—	—	—	15	—	2	21	177	11	—	—	—	—	—	2	—	1	—	—	—	3	—	6	242	13·91
18452	HARPURHEY	2	—	—	1	7	—	1	58	118	2	—	1	1	—	—	2	—	—	1	—	—	—	—	6	200	10·84
19415	LEVENSHULME	1	—	—	3	14	—	—	6	243	6	1	1	—	—	—	1	—	—	—	—	—	—	—	7	283	14·58
20163	LIGHTBOWNE	12	—	—	—	19	—	1	31	114	5	—	—	1	—	—	7	—	—	—	—	—	—	—	3	193	9·57
15477	LONGSIGHT	4	1	—	1	6	—	—	22	209	10	—	—	—	—	—	3	1	—	—	—	—	—	—	11	268	17·32
14613	MILES PLATTING	7	—	—	—	24	—	5	51	246	5	—	—	—	—	—	8	1	2	—	—	—	6	—	10	365	24·98
18924	MOSS SIDE EAST	14	—	—	—	17	—	1	43	278	18	1	—	—	—	—	3	—	—	2	—	—	4	—	20	401	21·19
17966	MOSS SIDE WEST	17	—	—	1	16	—	3	32	229	14	—	—	1	—	—	1	—	2	1	—	—	5	—	18	340	18·93
20363	MOSTON	19	—	—	10	27	—	3	72	246	11	—	1	—	—	—	21	2	2	5	—	—	—	1	2	422	20·72
14238	NEW CROSS	37	—	—	1	13	—	—	84	357	3	3	2	—	—	—	21	5	—	1	—	—	1	—	6	534	37·51
18785	NEWTON HEATH..	6	—	—	5	18	—	3	35	66	5	1	—	—	—	—	35	8	—	1	—	—	4	—	9	196	10·43
18811	NEWTOWN	2	—	—	—	10	—	—	76	205	2	2	—	—	—	—	11	3	—	3	—	—	3	—	7	324	17·22
24669	NORTHENDEN	18	—	—	3	43	—	2	78	718	39	—	—	—	—	—	3	4	1	5	—	—	—	—	8	922	37·38
16894	OLD MOAT	3	—	—	—	20	—	2	18	198	12	—	—	—	—	—	1	—	—	1	—	—	2	—	4	261	15·45
22644	OPENSHAW	5	—	—	—	7	—	—	38	177	13	4	—	—	—	—	12	1	4	6	—	—	1	—	6	274	12·10
16897	RUSHOLME	14	—	—	—	10	—	1	31	142	6	—	—	—	—	—	4	1	1	—	—	—	1	—	8	219	12·96
18984	ST. GEORGE'S	17	—	—	4	37	—	2	37	606	8	—	—	—	—	—	10	3	—	3	—	—	—	1	24	752	39·61
18019	ST. LUKE'S	6	—	—	11	8	—	—	43	273	16	2	—	—	—	—	7	4	—	—	—	—	1	—	26	397	22·03
21284	ST. MARK'S	6	—	—	3	13	—	—	32	190	15	—	—	—	—	—	1	2	—	1	—	—	4	—	17	284	13·34
11507	ST. PETER'S	—	—	—	4	11	—	—	18	194	4	1	—	—	—	—	6	5	—	3	—	—	3	—	8	257	22·31
15230	WITHINGTON	—	—	—	—	29	—	2	14	178	10	—	—	—	—	—	4	—	—	—	—	—	—	1	6	244	16·02
49934	WYTHENSHAWE	121	—	—	7	211	—	5	295	1525	94	4	1	—	—	—	14	1	1	7	—	—	5	1	16	2308	41·22
	HOSPITALS AND INSTITUTIONS	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	94	94	—

Primary vaccinations—year ended 31st December, 1954

Month	General practitioners										Hospitals										Medical officers and child welfare centres										Totals										Totals	
	0–1		1–2		2–5		5–15		15+		0–1		1–2		2–5		5–15		15+		0–1		1–2		2–5		5–15		15+		0–1		1–2		2–5		5–15		15+			
	*P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S
January	250	243	11	11	5	5	21	20	71	66	9	9	—	—	—	—	—	—	1	1	256	221	25	24	27	26	3	3	1	1	515	473	36	35	32	31	24	23	73	68	680	630
February	183	182	8	7	1	1	3	3	42	41	13	13	—	—	1	1	—	—	—	—	277	262	16	15	29	28	—	—	2	2	473	457	24	22	31	30	3	3	44	43	575	555
March	194	188	14	14	12	12	18	17	64	55	27	26	2	2	1	1	—	—	—	—	410	360	19	15	41	34	—	—	2	2	631	574	35	31	54	47	18	17	66	57	804	726
April	197	195	9	9	11	11	12	11	40	39	9	9	1	1	—	—	—	—	—	—	300	278	9	9	29	28	1	1	1	1	506	482	19	19	40	39	13	12	41	40	619	592
May	215	207	4	4	12	12	7	7	41	41	—	—	—	—	—	—	—	—	—	—	330	303	11	11	37	34	—	—	—	—	545	510	15	15	49	46	7	7	41	41	657	619
June	143	138	6	6	7	7	2	2	37	36	21	21	1	1	—	—	—	—	5	5	307	286	12	10	22	21	—	—	—	—	471	445	19	17	29	28	2	2	42	41	563	533
July	190	180	15	13	12	12	11	9	40	37	24	24	—	—	—	—	—	—	2	2	351	309	17	16	38	37	—	—	—	—	565	513	32	29	50	49	11	9	42	39	700	639
August	147	142	7	7	7	7	12	12	16	15	29	28	1	1	1	1	—	—	—	—	321	304	13	13	32	28	2	2	1	1	497	474	21	21	40	36	14	14	17	16	589	561
September	205	194	12	11	5	5	16	16	21	19	29	29	2	2	1	1	—	—	—	—	347	321	17	16	26	26	—	—	—	—	581	544	31	29	32	32	16	16	21	19	681	640
October	179	173	9	9	11	11	6	6	23	22	20	20	—	—	—	—	—	—	—	—	335	317	19	19	25	25	—	—	—	—	534	510	28	28	36	36	6	6	23	22	627	602
November..	161	155	13	12	11	11	3	3	27	27	9	9	1	1	—	—	—	—	—	—	317	296	17	15	23	23	—	—	1	1	487	460	31	28	34	34	3	3	28	28	583	553
December	64	60	2	2	6	6	8	8	13	13	6	6	—	—	—	—	—	—	—	—	129	119	6	6	8	8	—	—	—	—	199	185	8	8	14	14	8	8	13	13	242	228
Total ..	2,128	2,057	110	105	100	100	119	114	435	411	196	194	8	8	4	4	—	—	8	8	3680	3376	181	169	337	318	6	6	8	8	6,004	5,627	299	282	441	422	125	120	451	427	7,320	6,878

Re-vaccinations—year ended 31st December, 1954

Month	General practitioners										Hospitals										Medical officers and child welfare centres										Totals										Totals	
	0–1		1–2		2–5		5–15		15+		0–1		1–2		2–5		5–15		15+		0–1		1–2		2–5		5–15		15+		0–1		1–2		2–5		5–15		15+			
	*P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S
January	—	—	—	—	2	1	12	11	62	61	—	—	—	—	—	—	—	—	4	4	—	—	—	—	—	—	—	—	5	5	—	—	—	—	2	1	12	11	71	70	85	82
February	—	—	—	—	8	8	6	6	57	53	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	15	14	—	—	—	—	9	9	6	6	72	67	87	82
March	—	—	—	—	2	1	11	10	72	64	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	—	—	—	—	2	1	11	10	74	63	87	77
April	—	—	1	1	5	3	6	4	63	57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	6	—	—	1	1	5	3	6	4	69	63	81	71
May	—	—	1	1	1	1	4	4	51	48	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	—	—	1	1	1	1	4	4	53	50	59	56
June	—	—	—	—	3	3	5	5	48	47	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	3	3	5	5	49	48	57	56
July	—	—	—	—	3	3	5	5	54	50	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—	3	3	—	—	—	—	3	3	5	5	58	54	66	62
August	—	—	1	1	2	2	8	6	51	47	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	1	1	—	—	1	1	2	2	9	7	52	48	64	58
September	—	—	—	—	3	3	11	11	58	57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	3	—	—	—	—	3	3	11	11	61	60	75	74
October	—	—	—	—	1	1	5	4	35	31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	44	44	—	—	—	—	1	1	5	4	79	75	85	80
November..	—	—	—	—	3	3	5	4	54	51	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	—	—	—	—	3	3	5	4	56	53	64	60
December	—	—	—	—	1	1	1	1	25	25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	3	—	—	—	—	1	1	1	1	28	28	30	30
Total ..	—	—	3	3	34	30	79	71	630	591	—	—	—	—	—	—	—	—	5	5	—	—	—	—	1	1	1	1	87	86	—	—	3	3	35	31	80	72	722	682	840	788

*P = Performed. S = Successful.

rriers" and the virulence test

Of the total number of swabs submitted for examination to the Public lth Laboratory, "C. *diphtheriae grown*" was given as the result in 19 cases, a virulence test carried out in each instance proved that the strain was of mitis type, 8 of which were virulent and 11 non-virulent. The virulent s, 2 adults and 6 children, none of whom had been immunized, and members our different families living in a house let in lodgings, were treated in the ctious disease hospital, where they were diagnosed as diphtheria " carriers."

ly of anti-toxin

Jnder the National Health Service Acts, the responsibility for the provision iphtheria anti-toxin for use by general practitioners, when required, has taken over by the Manchester Regional Hospital Board. Arrangements inue for supplies of anti-toxin to be available at certain hospitals and fire ns in the City.

theria immunization

espite considerable efforts through the medium of the health visitors, re centres, school clinics, teachers, etc., to ensure that the immunization ildren is carried out, there was a slight fall in the numbers immunized 54. Admittedly there has been a decline in the number of live births of t years compared with the peak year 1947, with the resultant reduction tential children to be protected, but this in itself does not explain the ase in 1954. The reason is probably due to indifference on the part of its who, perhaps due to the comparative absence of diphtheria, have idered it unnecessary to adopt preventive measures to avoid the disease.

he mobile immunization unit (Dr. Anne Doreen Lepine, M.R.C.S., L.R.C.P.— cal Officer) continued to tour all parts of the City, with special ntration on those districts where facilities for immunization are incon- ntly situated, and those where, in the past, the public have not taken ntage of the services available. During the year, the unit was nsible for the complete immunization of 2,603 children, i.e. 25.46 per of the total number of children immunized in the City.

,225 Manchester persons received a complete course of diphtheria antigen ions; 440 others received an incomplete course and 12,260 were given forcing injection. In addition, 215 non-Manchester residents received mplete course, and 435 a reinforcing injection. The numbers were uted as follows:—

Number of Manchester persons immunized and number of immunizations effected

	Numbers having received complete course of antigen	Numbers having received incomplete course of antigen	Numbers havi received reinforc course of antigen
Schools and school clinics ..	2,014	215	11,084
Child welfare centres	3,321	106	638
Day nurseries	275	5	45
Hospitals	497	47	2
Health Office	10	1	11
Mobile unit	2,603	53	85
General practitioners	1,438	13	390
Manchester persons immunized by outside authorities ..	67	—	5
Persons from outside authorities immunized in Manchester	215	4	435
Total Manchester persons immunized	10,225	440	12,260
Total immunizations effected in Manchester	10,373	444	12,690

8,260 children under five years of age and 1,885 children of school ag total of 10,145 children) completed a full course of immunization. At close of the year, 79·97 per cent of Manchester children had been immuni the percentages in age groups being 62·21 in the group 0–4 years and 89·9 the group 5–14 years.

Antigens used in immunizing Manchester pre-school and school children

Age group	Numbers having received complete course of injections	Antigens used		
		A.P.T.	T.A.F.	P.T.A
Under 1 year	3,495	3,495	—	—
1—4 years	4,765	4,765	—	—
5—14 years	1,885	1,765	68	52
Totals—under 15 years ..	10,145	10,025	68	52

Although Schick testing is not practised as a routine in connection the greater part of the scheme, such tests were carried out largely among ho patients and staff. The number of primary tests performed during the ye persons not previously immunized was 36, of which 11 gave positive r and 25 negative. 292 posterior tests were carried out on persons previ immunized of which 38 gave positive and 254 negative results.

The following table illustrates the progress of the immunization sc since its inception :—

	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	
Under 1 year	4311	1071	915	740	503	1497	1761	2298	1767	2383	2540	3349	4582	4678	3863	3281	3411	3108	3495	Total under 5 years at end of 1954
1 year ..	5871	1169	1228	965	912	1882	2411	3557	2927	4379	4202	3444	4747	3994	3222	4133	3931	3848	3243	
2 years ..	4607	890	894	576	409	1295	1292	1567	342	1258	1517	574	1139	1134	837	842	1093	940	831	
3 ,, ..	4484	901	824	476	272	1065	1140	1504	168	554	1045	280	369	439	405	462	541	461	360	36329
4 ,, ..	4645	906	856	475	238	1057	920	1710	145	342	600	202	220	189	207	420	466	398	331	
5 ,, ..	5014	951	866	464	192	1226	473	1747	182	264	333	100	132	116	170	444	603	583	511	
6 ,, ..	5113	972	878	447	222	1241	379	2165	199	233	269	77	91	74	171	483	381	467	375	Total 5–10 years
7 ,, ..	4986	890	832	382	195	1215	236	1577	206	139	215	52	68	58	171	515	310	225	287	
8 ,, ..	5101	857	711	408	179	1137	176	931	106	101	189	43	63	33	141	640	337	199	170	50882
9 ,, ..	4903	678	583	336	162	1036	112	805	98	68	143	36	54	31	159	584	363	164	111	
10 ,, ..	4473	698	613	308	137	1050	117	864	97	87	86	28	37	23	216	749	380	198	105	
11 ,, ..	3561	459	444	274	86	933	121	595	72	71	89	15	27	16	165	645	354	149	87	Total 10–14 years
12 ,, ..	2952	419	395	218	43	1038	131	465	32	67	61	22	18	7	186	702	426	160	78	
13 ,, ..	2354	424	396	259	39	502	100	436	33	50	36	11	15	5	145	747	398	166	90	42898
14 ,, ..	699	117	79	49	11	219	53	51	12	14	17	6	11	5	126	567	260	125	71	
15 years and over..	2812	444	240	102	105	309	221	298	139	210	155	112	108	47	60	155	68	75	80	Total 15 years & over 135025
Totals 1928-54	65886	11846	10754	6479	3705	16702	9643	20570	6525	10220	11497	8351	11681	10849	10244	15369	13322	11266	10225	265134

The totals at the end of 1954 indicate only approximately the immune population since no account is taken of any deaths that may have ensued amongst the immunized children.

Meningococcal infection

31 notifications were received. Of this number, 6 were from gen practitioners and these cases were removed to the isolation hospital; 4 w confirmed subsequently. 25 were notified from and treated in various hospi in the City, thus making a total of 29 confirmed cases of meningococ meningitis.

2 deaths occurred from the disease—a case mortality rate of 6.9 per ce as compared with 18.2 per cent. in 1953.

As regards seasonal prevalence, it will be observed from the follow table that 79 per cent. of the cases occurred in the first and third quarters the year.

Cases of menlngococcal infection in quarters of the year, age groups and sexes

	1st quarter		2nd quarter		3rd quarter		4th quarter		Tota
	M	F	M	F	M	F	M	F	M
Under 5 years	6	4	1	1	4	4	2	2	13
5— 9 ,, ...	—	2	—		—		—		—
10—14 ,, ...	—	1	—		—		—		—
15—19 ,, ...	—		—		—		—		—
20—24 ,, ...	—		—		1	—	—		1
25—34 ,, ...	—		—		—		—		—
35 and over	—		—		1	—	—		1
All ages	6	7	1	1	6	4	2	2	15

Poliomyelitis

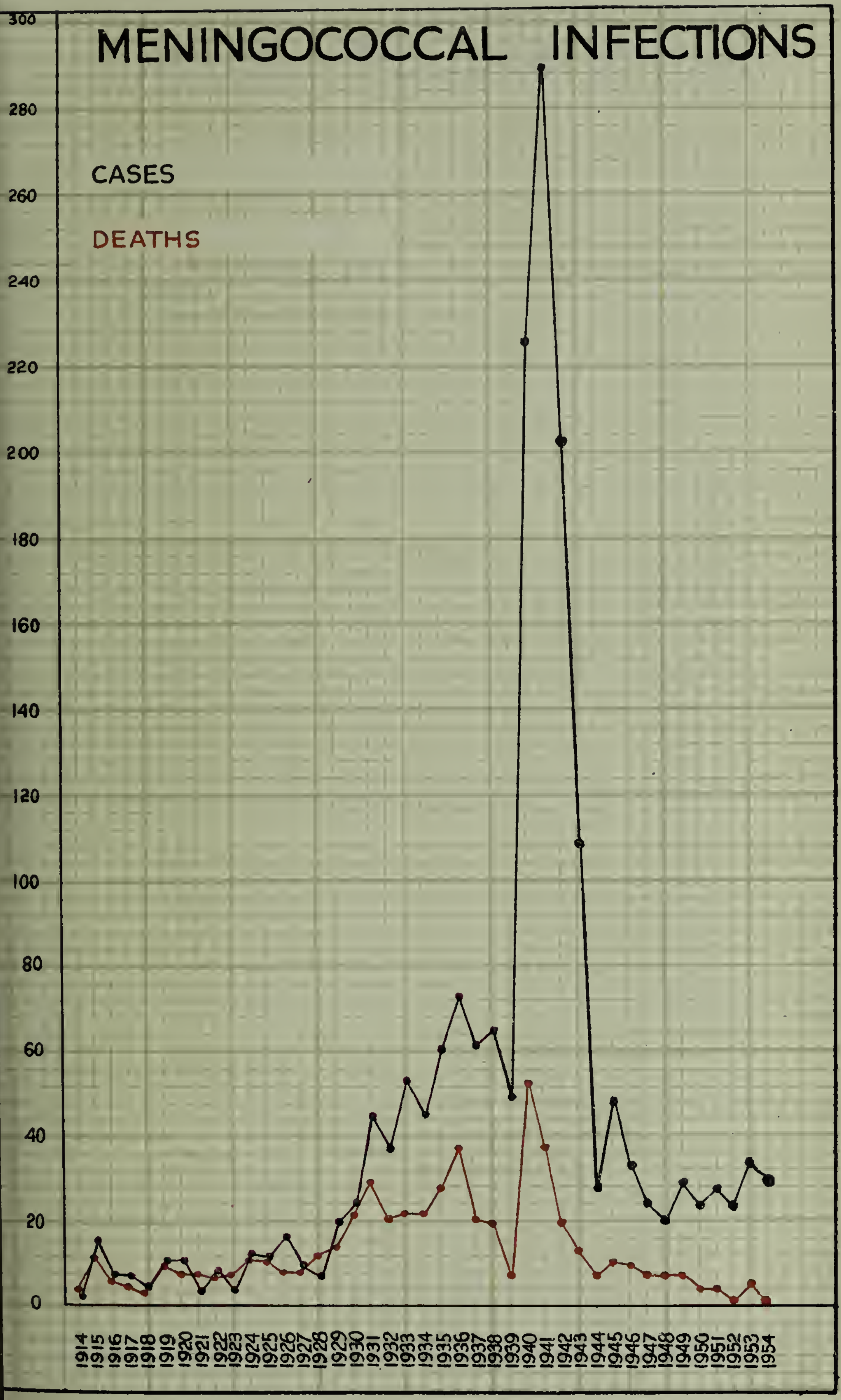
Of the 30 original notifications of poliomyelitis, 13 patients were fir confirmed as suffering from the disease, 9 paralytic and 4 non-paralytic. T was one death, a boy of 13 years of age, who, on admission to hospital, diagnosed as encephalitis, but a post-mortem revealed poliomyelitis (paralytic). In addition, a boy aged seven years, whose normal place of resid was in Manchester, died in a Surrey hospital from poliomyelitis (paraly This case was included in the transferable deaths from the Registrar Ge but is not shown in the following tables :—

Months of onset of confirmed cases :—

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.
Paralytic	1	—	1	—	—	—	3	—	1	1	—
Non-paralytic ..	—	—	—	—	1	1	1	1	—	—	—

The sex and age distributions of the cases were as follows :—

		-1	1-2	3-4	5-9	10-14	15-24	25+
Paralytic	Male	1	2	1	1	—	1	—
	Female	—	—	—	1	—	1	1
Non-paralytic	Male	—	—	—	1	1	—	1
	Female	—	—	—	1	—	—	—
Total	Male	1	2	1	2	1	1	1
	Female	—	—	—	2	—	1	1


MENINGOCOCCAL INFECTIONS
CASES
DEATHS
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
1914
1915
1916
1917
1918
1919
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
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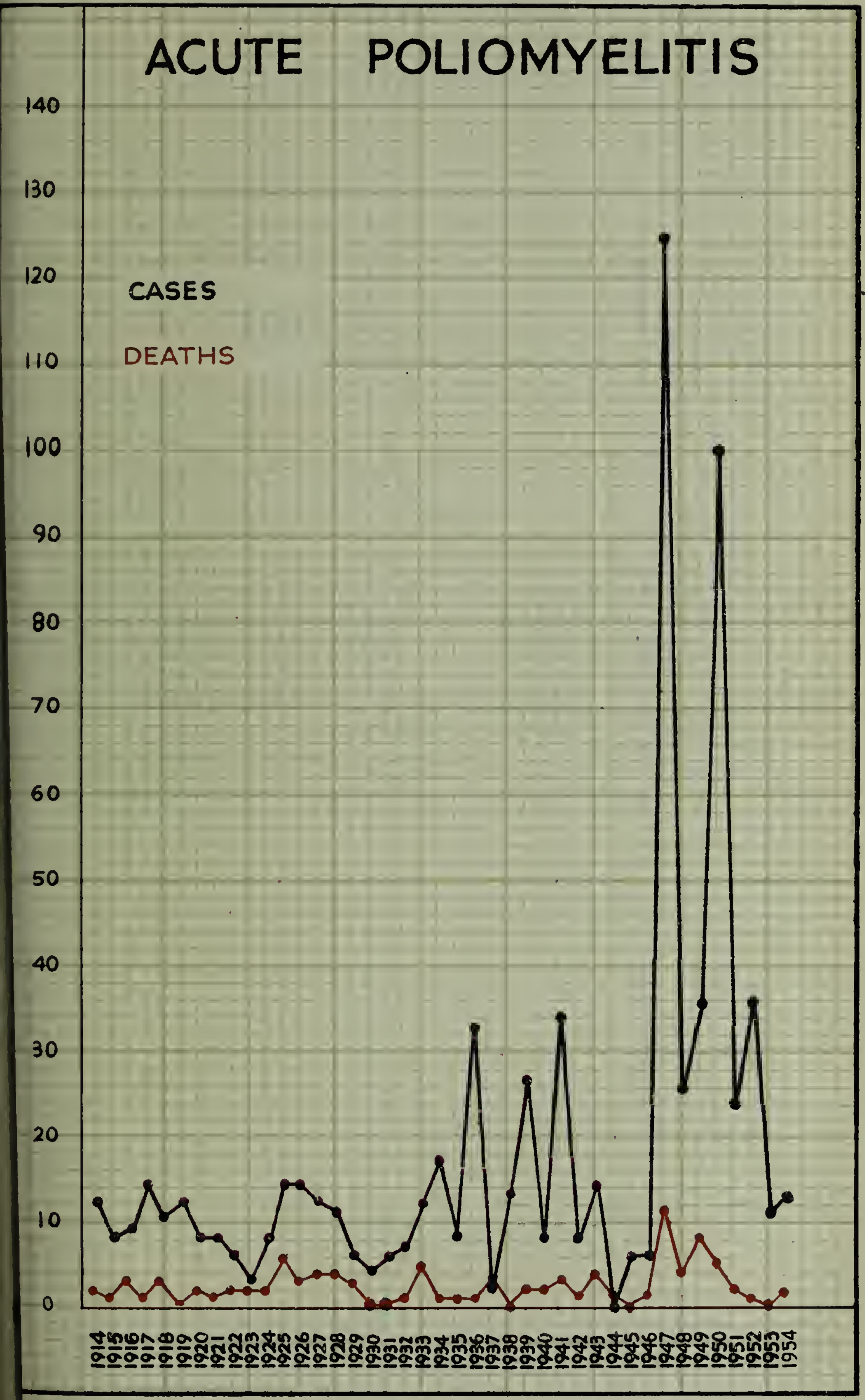
1945
1946
1947
1948
1949
1950
1951
1952
1953
1954


ACUTE POLIOMYELITIS
CASES
DEATHS
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
1914
1915
1916
1917
1918
1919
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939
1940
1941
1942
1943
1944
1945
1946
1947
1948
1949
1950
1951
1952
1953
1954

The following table shows the incidence of poliomyelitis and deaths during he past five years :—

Age groups	Cases															Deaths														
	1954			1953			1952			1951			1950			1954			1953			1952			1951			1950		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
ler 1 year	1	–	1	–	–	–	–	2	2	–	1	1	5	–	5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2 years	2	–	2	1	1	2	4	5	9	2	1	3	14	10	24	–	–	–	–	–	–	–	–	–	1	–	1	–	–	–
years	1	–	1	1	1	2	1	6	7	1	7	8	7	6	13	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
years	2	2	4	1	–	1	6	3	9	2	2	4	13	12	25	–	–	–	–	–	–	1	–	1	–	–	–	–	1	1
14 years	1	–	1	1	–	1	1	–	1	–	1	1	7	5	12	1	–	1	–	–	–	–	–	–	–	–	–	–	1	1
24 years	1	1	2	2	–	2	3	1	4	5	–	5	5	6	11	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
nd over	1	1	2	2	1	3	1	2	3	–	1	1	5	3	8	–	–	–	–	–	–	–	–	–	–	1	1	1	–	1
Total	9	4	13	8	3	11	16	19	35	10	13	23	56	42	98	1	–	1	–	–	–	1	–	1	1	1	2	1	4	5

Particulars of the 13 cases are given below:—

Age	City ward	Onset	Notified	Site of paralysis	Condition—February, 1955
20	Levenshulme ..	5th Jan.	28th Jan.	Left leg	Recovered; no paralysis.
7¼	Wythenshawe ..	12th Mar.	22nd Mar.	Both legs	Improving; wears calipers
42	Harpurhey ..	9th May	27th May	None	Recovered.
5¼	Moss Side West	15th June	18th June	None	Recovered.
1¾	New Cross	15th July	21st July	Left leg	Recovered; no paralysis.
5	Lighthowne ..	25th July	28th July	None	Recovered; no paralysis.
1½	Chorlton-c.-H.	31st July	6th Aug.	Legs and back	Improving; no calipers.
13	All Saints.. ..	4th Aug.	10th Aug.	—	Died.
1	New Cross ..	20th July	12th Aug.	Left arm	Improving; wears splints.
5	Harpurhey ..	16th Sept.	7th Oct.	Left knee	Satisfactory; no calipers.
4¾	Moston	4th Oct.	15th Oct.	None	Recovered; no paralysis.
23	All Saints ..	2nd Dec.	8th Dec.	Left arm and leg	Improving; slight paralysis left arm.
30	Barlow Moor ..	7th Dec.	11th Dec.	Upper limbs	Improving; slight paralysis right arm.

Table showing the distribution of cases of poliomyelitis in City wards and the health of patients in February, 1955

CITY WARD	Notifications		Confirmed cases		Paralytic		Non-paralytic		Deaths		Condition—February, 1955				
											Paralytic		Recovered; no paralysis		Unobtained
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Alexandra Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
All Saints	2	1	1	1	—	1	1	—	1	—	—	1	—	—	1
Ardwick	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Barlow Moor	—	1	—	1	—	1	—	—	—	—	—	1	—	—	—
Beswick	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Blackley	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bradford	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Burnage	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cheetham	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chorlton-cum-Hardy ..	2	—	1	—	1	—	—	—	—	—	—	—	1	—	—
Collegiate Church	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Crumpsall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Didsbury	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gorton North	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gorton South	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Harpurhey	1	2	1	1	—	1	1	—	—	—	—	—	1	1	—
Levenshulme	1	—	1	—	1	—	—	—	—	—	—	—	1	—	—
Lightbowne	2	—	1	—	—	—	1	—	—	—	—	—	1	—	—
Longsight	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Miles Platting	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Moss Side East	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—
Moss Side West	—	1	—	1	—	—	—	1	—	—	—	—	—	1	—
Moston	1	—	1	—	1	—	—	—	—	—	—	—	1	—	—
New Cross	2	3	2	—	2	—	—	—	—	—	1	—	1	—	—
Newton Heath	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Newtown	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Northenden	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Old Moat	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Openshaw	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rusholme	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
St. George's	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
St. Luke's	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
St. Mark's	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Withington	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—	—	—	—	—

cute encephalitis (infective—post-infectious)

No notification of this disease was received.

ıeumonia

There were 384 cases of pneumonia notified, consisting of:—

Primary pneumonia	lobar	250	384
	lobular	57	
	unclassified	59	
Influenzal pneumonia	.. ..	18	

Investigations were carried out in the majority of the cases; 119 of them ere treated in hospital.

There were 317 deaths, 75 lobar, 224 lobular and 18 unclassified. In dition, there were 11 deaths from influenza associated with pneumonia.

alaria

No notification was received.

ıthrax

No case of anthrax came to the notice of the Department.

easles and German measles

The reported number of cases of measles increased from 6,798 recorded ring 1953, to 9,844 cases in 1954. Of this total, 8,104 or 82 per cent. occurred the last quarter of the year, when the epidemic reached its peak in the week ded 11th December, with 894 cases reported..

Cases notified	1954				
	1st quarter	2nd quarter	3rd quarter	4th quarter	Totals
LES—					
By medical practitioners	70	268	1,208	7,576	9,122
,, others (parents, health visitors and school authorities) ..	3	46	145	528	722
Totals	73	314	1,353	8,104	9,844
AN MEASLES—					
By medical practitioners	43	53	91	57	244
, others (parents, health visitors and school authorities) ..	42	30	60	65	197
Totals	85	83	151	122	441

ooping cough

Whooping cough became compulsorily notifiable in October, 1939; before date the source of notification was solely from the schools. 1,642 cases vhooping cough were notified; this figure is the lowest recorded in the 12 years.

1st quarter	2nd quarter	3rd quarter	4th quarter	Total
542	464	396	258	1,642

Incidence of whooping cough at age periods 0—5 and 5 years and over

Disease	Under 5 years	5 years and over	Total
Whooping cough	1,130	512	1,642

Whooping cough immunization

The special " trial " scheme of immunization of children between the a of six months and four years against whooping cough which commenced January, 1951, in co-operation with the Medical Research Council, closed 30th June, 1954. In January, 1953, immunization against whooping co was introduced in the City and is being operated chiefly by general practitior and medical staff at infant welfare centres and day nurseries. It is, perha too early to make observations on the efficacy of the vaccine used, but i significant that the incidence of whooping cough in 1954 was the lowest si 1942, so that it very much looks as if it could be claimed that whooping co immunization has helped to abate the prevalence of the disease and also have an appreciable effect on its future incidence.

During the year, 4,369 children received a full course of 3 injection compared with 3,624 in the previous year; 445 were given reinforcing d as against 125 in 1953.

The total numbers of children in age groups who received complete courses in 1953 and 1954

Age	Welfare centres		General practitioners		Day nurseries		Hospitals		Health Office		Tot
	1953	1954	1953	1954	1953	1954	1953	1954	1953	1954	1953
Under 1	1,985	2,532	129	376	20	30	80	—	2	2	2,216
1—2	750	683	122	211	72	64	9	—	—	3	953
2—3	147	149	20	32	60	57	—	—	2	2	229
—4	73	75	16	24	39	43	—	—	3	—	131
4—5	57	49	10	15	27	20	—	—	1	2	95
	3,012	3,488	297	658	218	214	89	—	8	9	3,624

The total numbers of children, in age groups, who received reinforcing injections in 1953 and 1954

Age	Welfare centres		General practitioners		Day nurseries		Hospitals		Health Office		To
	1953	1954	1953	1954	1953	1954	1953	1954	1953	1954	1953
Under 1 ..	—	—	—	—	—	—	4	—	—	—	4
1—2	—	—	—	1	—	—	15	—	—	—	15
2—3	—	2	—	1	—	—	37	—	—	1	37
3—4	4	88	2	4	—	—	43	2	—	—	49
4—5	15	335	4	9	1	1	—	—	—	1	20
	19	425	6	15	1	1	99	2	—	2	125

Typhoid and paratyphoid fever

Two cases of typhoid fever were notified, one of which was finally diagr as enteritis. The remaining case, a male aged 43 years, was found to S. typhi in his stools, and after a month's treatment in the isolation ho was discharged as a " typhoid carrier." The patient was kept under observ at home, and subjected to bacteriological tests until 12 consecutive neg specimens of faeces were obtained.

One notification of paratyphoid fever was received, the diagnosis of which s subsequently corrected.

sentery

During the year, 521 cases of dysentery were notified or otherwise ascertained. ter revision, 467 were accepted and of these 426 were confirmed bacterioically as being Shigella Sonnei, 2 Flexner, 1 Newcastle; in the remainder causative organism was not identified.

The following table shows corrected notifications by quarters of the year d by sex:—

	Males	*Females*	*Totals*
1st quarter	35	38	73
2nd quarter	71	78	149
3rd quarter	75	83	158
4th quarter	42	45	87
Totals	223	244	467

The main sources of infection were among children attending day nurseries schools and other members of the patients' families. It is probable that incidence of this disease was appreciably higher than the notification res suggest, and that, because of the mildness of the illness, many cases t unnoticed.

Classification of cases of dysentery in various age groups are as follows:—

Age group	*Males*	*Females*	*Totals*
Under 5 years	138	121	259
5—14 years	72	72	144
Totals	210	193	403
15 years and over	13	51	64
Totals	223	244	467

rlet fever

767 cases of scarlet fever were notified; 146 or 19 per cent. of the cases hospitalized and case mortality was 0.13.

rnational certificates of vaccination

Jnder the International Sanitary Regulations, 1952, certificates of ination and inoculations issued to travellers and signed by doctors tising in the City are required to be checked, stamped and countersigned e Department; 1,568 such certificates were dealt with.

d poisoning

	No. of outbreaks	*No. of cases*	*Single cases*	*Remarks*
	10	52		Agent identified
	5	16		Agent unknown
			21	Agent identified
			18	Agent unknown
Totals	15	68	39	
		107		

Summary:		
	No. notified	94
	No. ascertained	13
	Total	107

rief details of the cases are contained in the following schedule of food ning incidents copied in the suggested form for annual returns to the ster of Health as in Appendix D (ii) of the revised memorandum Med. 1949:—

Summar

Cases wh

Outbreak caused by		Cases		Illness—clinical features		
Food	Agent	Notified	Ascertained	Average incubation	Main symptoms	Severity
1. Not known ..	S. typhimurium	1	—	—	Pneumonia diagnosed, diarrhoea occurred later	Moderate
2. Not known ..	do.	1	—	—	Persistent diarrhoea	Mild
3. Not known ..	do.	1	—	—	Diarrhoea (blood present), pyrexia, abdominal pain, vomited	Moderate
4. Not known ..	do.	1	—	—	Abdominal pain, severe diarrhoea (blood present), vomited	Moderate
5. Not known ..	do.	1	—	—	Diarrhoea, pyrexia, vomited and cramps	Moderate
6. ? Hen egg	do.	1	—	—	Diarrhoea (blood present), vomited, abdominal pain	Mild
7. Not known ..	do.	3	—	—	1 case had diarrhoea (blood present) and vomited 2 cases had no symptoms of illness	Mild —
8. Not known ..	do.	1	1	—	Diarrhoea in both cases ..	Mild
9. Not known.. ..	do.	1	—	—	Loose stools	Very mild
10. Not known.. ..	do.	2	—	—	1 case no illness. Other case had abdominal pain, diarrhoea (blood present)	Mild
11. Not known.. ..	do.	1	—	—	Abdominal pain, vomited ..	Moderate
12. ? Luncheon meat..	do.	4	—	—	1 case diarrhoea (blood present), pyrexia, vomited. Others had no symptoms of illness	Moderate
13. Not known.. ..	do.	1	—	—	Abdominal pain, diarrhoea, anorexia, vomited	Moderate
14. Not known.. ..	do.	1	—	—	Diarrhoea, anorexia	Mild
15. Not known.. ..	do.	1	—	—	Pyrexia, diarrhoea, abdominal pain, nausea	Moderate
16. Not known.. ..	do.	4	—	—	Nausea, vomited, diarrhoea, pyrexia, languid, anorexia	Moderate
17. Not known.. ..	do.	1	—	—	Whooping cough and diarrhoea	Moderate
18. Not known.. ..	do.	1	—	—	Faecal specimen taken on admission, no illness	—
19. Not known.. ..	do.	2	—	—	? Pneumonia, abdominal pain	Moderat
20. Not known.. ..	S. cholerae suis var. kunzendorf	1	—	—	1 faecal specimen taken on admission, no illness	—
21. Not known.. ..	Salmonella muenster	1	—	—	Faecal specimen taken on admission to institution. No symptoms of illness	—

ing

were identified

Results of laboratory investigations			Origin and preparation of food suspected	Place at which food causing illness was consumed	Estimated number at risk	Probable origin of infection or contamination of food
Food samples	Food handlers (faecal specimens)	Other (faecal specimens)				
—	—	—	—	Home	1	Not known.
—	—	—	Mainly breast fed	Home and hospital	1	do.
—	—	3—negative	—	Home	5	do.
—	—	4—negative	—	Home	5	do.
—	—	2—negative	—	Office canteen or home	3	do.
—	—	—	—	Home	1	do.
—	—	—	—	Home	4	do.
—	—	4—negative	—	Home	6	do.
—	—	—	—	Home or on holiday in N. Wales	3	do.
—	—	2—negative	—	Home	4	do.
—	—	—	—	En route from Guernsey to Manchester	?	do.
—	—	2—negative	—	Home	6	do.
—	—	3—negative	—	Home	4	do.
—	—	—	—	Home	1	do.
—	—	2—negative	—	Home	4	do.
—	—	2—negative	—	Home	6	do.
—	—	—	—	Home	3	do.
—	—	1—negative	—	Children's home and nursery	?	do.
—	—	—	—	? Hospital	?	do.
—	—	—	—	Children's home and nursery	?	do.
—	—	3—negative	—	Not known	4	do.

Outbreak caused by		Cases		Illness—clinical features		
Food	Agent	Notified	Ascertained	Average incubation	Main symptoms	Severity
22. Pressed brisket ..	Staph. aureus	2	—	1½–4 hrs.	Nausea, abdominal pain, vomited, pyrexia, diarrhoea, general debility	Moderate to severe
23. Not known.. ..	S. brandenberg	6	—	—	Languid, feverish, diarrhoea (blood present), vomited, anorexia. No symptoms of illness in 4 cases	Moderate
24. Not known.. ..	S. enteritidis var. jena	1	—	—	Vomited, diarrhoea, pyrexia, anorexia	Moderate
25. Not known.. ..	S. thompson	1	—	—	No symptoms of food poisoning. Ear discharge, sore throat and common cold	Mild
26. Not known.. ..	do.	4	—	—	1 case constipated, vomited, pyrexia, anorexia, abdominal pain. No symptoms of illness in other cases	Moderate
27. Not known.. ..	Staph. aureus	19	4	4–8 hrs.	Diarrhoea, vomited, nausea, cramps, pyrexia	Moderate
28. Not known.. ..	S. morbificans	1	—	—	Diarrhoea, vomited, pyrexia, anorexia	Moderate to severe
29. Not known.. ..	S. reading	1	—	—	Abdominal pain	Moderate
30. Not known.. ..	Staph. aureus	1	—	—	Back-ache, vomited, diarrhoea	Moderate
31. Not known.. ..	S. typhimurium	1	—	—	Cardiac failure, S. typhimurium	Severe

esults of laboratory investigations			Origin and preparation of food suspected	Place at which food causing illness was consumed	Estimated number at risk	Probable origin of infection or contamination of food
Food samples	Food handlers (faecal specimens)	Other (faecal specimens)				
Pressed brisket 1 +ve	Butcher's nasal swab — neg. and 7 hand and finger swabs +ve	—	Prepared by local butcher from raw meat purchased by wholesale	Home	?	Handling and cooling after preparation of brisket.
—	—	—	—	Home	6	Not known.
—	—	2 — negative	—	Home	4	do.
—	—	3 — negative	—	Home	4	do.
—	—	5 — negative	—	Home	7	Subsequent outbreak. ? Carrier.
—	—	3 — negative	—	Wedding party held in Salford	250	Not known. Investigated in Salford C.B.
—	—	2 — negative	—	Home, place of work and local hostelry	?	Not known.
—	—	3 — negative	—	Home	4	do.
—	—	4 — negative	—	Home	5	do.
—	—	—	—	—	—	Man aged 73 years and lived alone.

continued overleaf

Cases where causal

Outbreak caused by	Cases		Illness—Clinical features		
Food	Notified	Ascertained	Average incubation	Main symptoms	Severity
32. ? " Salami " sausage	1	—	Few hours	Vomited, headache, diarrhoea	Mild
33. ? Steak	1	—	—	Abdominal pain, nausea, vomited, diarrhoea, pyrexia, weakness	Mild
34. Not known	1	—	—	Vomited, diarrhoea	Mild
35. ? Slab cake	4	—	—	1 case vomited 1 case headache and nausea 2 cases vomited and nausea	Very mild
36. Not known	3	—	—	Abdominal pain and diarrhoea	Mild
37. Not known	2	—	3 hrs. ?	Abdominal pain, diarrhoea, vomited	Mild to moderate
38. ? Egg custard	1	—	Few hours	Abdominal pain, vomited, diarrhoea, languid	Mild
39. Not known	1	—	—	Abdominal pain, vomited, diarrhoea	Mild
40. Not known	1	—	—	Vomited, diarrhoea, anorexia, pyrexia, abdominal pain, rash on face and chest	Mild
41. Not known	1	—	—	Loose stools, abdominal pain	Mild
42. Not known	—	1	—	Pallor, abdominal pain and vomited	Severe
43. ? Pork and egg pie	—	4	10 hrs.	Nausea, diarrhoea, vomited..	Mild
44. ? Tinned rhubarb	—	3	3 hrs.	Vomited	Mild
45. Not known	1	—	—	Abdominal pain, diarrhoea, anorexia	Mild
46–54. Not known	9 (Single cases)	—	—	Diarrhoea	Mild

found

ults of laboratory investigations			Origin and preparation of food suspected	Place at which food causing illness was consumed	Estimated number at risk	Probable origin of infection or contamination of food
Food samples	Food handlers (faecal specimens)	Other (faecal specimens)				
—	—	—	—	Home	4	Not known.
—	—	—	—	Cafe	?	do.
—	—	3 — negative	—	Home	4	do.
Slab cake — neg.	—	—	Cake purchased locally	Home	4	do.
—	—	—	—	Home	7	do.
Tinned eas — neg. bacterio- logically and hemically	—	—	—	Home	2	do.
—	—	2 — negative	—	Home	3	do.
—	—	—	—	Home	3	do.
—	—	—	—	Home and cafes	1	do.
—	—	—	—	Home	3	do.
Milk powder neg — acterio- ogically and emically	—	2 — negative	—	Home	3	do.
— neg. ork pie and ripping	—	—	Prepared at home, pork purchased from local butcher	Home	4	do.
tins of hubarb — neg. emically	—	—	—	Home	3	do.
—	—	—	—	Home	3	do.
—	—	—	—	Home	9	do.

GENERAL MEDICAL SERVICES

Arrangements for medical examinations of Corporation employees for purpose connected with their employment are made through the He Department.

Entrants

Administrative, professional and technical staff entering the Corporat service are medically examined in accordance with the regulations of the Council by independent specialists and, if necessary, X-ray examinations arranged.

Members of the staff of the Health and Children's departments who covered by the provisions of the combined Circular 64–50 from the Minist of Health and Education and the Home Office, relating to persons working children have an X-ray examination on joining the service and at speci regular intervals afterwards.

Home helps and day nursery staff are medically examined on appointm by a medical officer of the Department.

Medical examinations of persons residing in Manchester who are joining staffs of other local authorities are arranged at the request of such authori

Retirement through incapacity

Under the superannuation provisions of the Manchester Corporation 1920, applicants for retirement on superannuation through incapacity medically examined under the direction of the Medical Officer of Health the necessary certificate issued if the person proves to be unfit to continue his duties. These examinations are conducted by the Senior Medical O (Administrative).

Miscellaneous examinations

Medical examinations of sick employees are carried out at the reques Corporation committees. These requests are usually made when a me of the staff has been absent for some time due to sickness but has not application to retire on medical grounds ; the examinations are undertake the Senior Medical Officer (Administrative).

Staff welfare

Staff employed in the Town Hall and Extension who are involve accidents or taken ill whilst at work are treated in the Staff Accident and W Room. The necessary medical and nursing treatment is provided by Health Department. 61 persons were so treated during 1954.

Details of the medical examinations carried out by the medical staff of the partment, and by independent specialists, are shown in the following le:—

Medical examinations of staff

Department	Entrants to the Corporation service	Retirements on superannuation	Miscellaneous	Total
rd Mayor's	1	—	—	1
wn Clerk's	21	1	—	22
ths and Wash-houses	3	1	4	8
ildren's	90	2	3	95
ty Architect's	27	1	—	28
ty Surveyor's	47	3	2	52
ty Treasurer's	12	1	—	13
eansing	2	9	1	12
using	20	3	1	24
arkets	5	3	—	8
rks and Cemeteries	8	3	2	13
alth	176	7	1	184
vers	1	1	—	2
tionery	9	—	—	9
aterworks	27	—	—	27
elfare Services	29	1	—	30
rports	20	1	—	21
bation Service	3	—	—	3
nsport	52	53	—	105
raries	60	1	1	62
ice	12	1	1	14
ights and Measures	1	1	—	2
wn Hall Superintendent's	1	—	—	1
ication	—	3	—	3
otals	627	96	16	739
or other local authorities	19	—	—	19
GRAND TOTAL	646	96	16	758

NOTE.—The medical examination of entrants into the service of the Education Department is arranged within the School Health Service.

MENTAL HEALTH SERVICE

This part of the report gives particulars of the operation of the Counc schemes during 1954 under the Mental Deficiency Acts, 1913–38, and Lunacy and Mental Treatments Acts, 1890–1930, as amended by the Natic Health Service Acts, 1946–52.

Administration

Mental Health Sub-committee

The Service is operated by the Council through the Health Committee a Mental Health Sub-committee has been established consisting of 14 memb including a co-opted representative of the Manchester District Nursing Inst tion. The Sub-committee meets each month and deals with all matters wit the purview of the local health authority relating to mental health, with exception of staff appointments, salaries, wages and conditions of service. Sub-committee has no delegated powers and all its proceedings are subject confirmation by the Health Committee and the City Council.

Staff

The Medical Officer of Health is approved by the Minister of Health for purpose of making recommendations for voluntary and temporary treatm under the Mental Treatment Act, 1930. He is also authorized by the l health authority, as are the Deputy Medical Officer of Health and the Sen Medical Officer (Administrative), to give medical certificates accompany petitions to judicial authorities for Orders under the Mental Deficiency A 1913–38.

Three male duly authorized officers, formerly general relieving officers the Social Welfare Committee, are employed to initiate proceedings for the and treatment of persons suffering from mental illness, and a twenty-four h duty rota is maintained to deal with emergencies which occur outside nor office hours. Five female mental health visitors, all experienced social work supervise the domiciliary care and progress of the mentally defective ; two qualified in mental or mental deficiency nursing and are also State-registe nurses ; one is a University graduate with training in social work.

The care and after-care of mental illness is provided by two qualified fe psychiatric social workers.

All the staff are employed full-time.

Following consultations with the University and the Manchester Regi Hospital Board, referred to in the Annual Report for 1953, Dr. Northage J V. Mather was appointed Consultant Psychiatrist to the Mental Health Serv on a sessional basis. The value of this appointment will be considered in section dealing with care and after-care.

Three staff changes have taken place in the year. Following the resignatio the Administrative Assistant to the Service in December, 1953, in order to up an appointment outside Manchester, his successor was appointed on January. In April, one of the mental health visitors and, in October, one of psychiatric social workers resigned, both taking up appointments in the Hos Service. Both these ladies were replaced by people of equivalent qualificati

The number of staff employed in the occupation centres is given in the ›wing table, and is in accordance with the recommendations of the Ministry Health contained in Circular 91/49.

Occupation centre staff

Occupation centre	Supervisor	Assistant supervisor	Cleaner	Stoker
ats	1	2	1	—
ria Park	1	8*	3	1
enshawe	1	3	1	—
Total	3	13	5	1

ıcludes 1 male occupation centre assistant supervisor who resigned in November, 1954, ler to take up a similar appointment outside Manchester; the vacancy was not filled by ıd of the year.

rdination with hospitals

he shortage of hospital accommodation, which is not only a local but also ional problem, has continued throughout the year as a major problem of ervice. This shortage is particularly serious on the mental deficiency side e work and, at the end of the year, there were 107 mental defectives on the hester Regional Hospital Board's waiting list for admission to permanent ential accommodation—a rise of 11 compared with 1953. These are fied according to sex, age and type in the following table which also ates the period of time that these patients have been awaiting vacancies.

Type, age and sex distribution of mental defectives awaiting hospital admission

me on waiting list	MALE								FEMALE								Total
	Under 16				Over 16				Under 16				Over 16				
	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)	
ears	—	1	1	2	—	2	—	—	2	1	—	—	—	1	2	—	12
	2	4	—	—	—	—	1	1	1	1	—	—	—	—	2	1	13
	1	5	2	—	—	2	3	1	2	—	—	—	2	2	3	1	24
	2	1	1	—	2	2	3	1	4	2	—	—	—	2	4	2	26
year	3	5	3	1	—	6	2	2	2	4	1	—	—	3	—	—	32
waiting list, st December, 1954	8	16	7	3	2	12	9	5	11	8	1	—	2	8	11	4	107

(*a*) cot and chair cases.
(*b*) ambulant low grade cases.
(*c*) medium grade cases.
(*d*) high grade cases.

cause of the problem presented by the number of patients on the Regional tal Board's waiting list, the Board's Working Party on the Problems of l Deficiency called for, and received, the co-operation of the Service in ng out a pilot survey of Manchester patients in mental deficiency hospitals ould, on medical grounds, be recommended for discharge. The results survey are to be embodied in the Working Party's report.

Admissions to mental deficiency hospitals have numbered 77 during 1 Their age and sex distribution, together with the authority on which they admitted, is shown in the following table. The number of per admitted to mental hospitals appears under the section of this report dealing the Lunacy and Mental Treatment Acts.

Mental defectives admitted to mental deficiency hospitals

Method of admission	Male		Female	
	Under 16	Over 16	Under 16	Over 16
Upon petition	2	8	1	11
Placed by parent	4	—	3	1
By Court Order	—	1	1	—
By Order of the Secretary of State..	—	1	—	—
Place of safety	1	2	2	2
Temporary admission	17	6	8	6
Total	24	18	15	20

Particular mention must be made of the valuable contribution by m deficiency hospitals in providing short-term care for mental defectives in of urgency. During the year 27 cases were so admitted with a conse alleviation of family crises.

Close co-operation has continued to exist between the Service and a mental and mental deficiency hospitals in the region, and in 1954 the foll domiciliary reports were supplied to the hospitals upon request :—

Social history, progress, licence and recertification reports

Type of report	Male		Female	
	Under 16	Over 16	Under 16	Over 16
Social history	—	11	—	27
Progress	—	126	—	34
Licence	27	111	4	61
Recertification	20	110	22	76
Total	47	358	26	198

A satisfactory degree of co-ordination existed throughout the year b the Service and the staffs of mental hospitals in the area, particularly in r to the exchange of information which proved invaluable in meeting the aft requirements of discharged patients.

ntary associations

Io duties were delegated to voluntary associations. As in previous years, Council, with the approval of the Minister, continued their annual ribution of £25 in support of the general work of the National Association Mental Health.

party of 26 pupils from occupation centres again enjoyed a week's holiday e Association's Home at Rhyl, and a member of the occupation centre staff again seconded to the Association's annual course, based on Manchester, he training of staffs employed in those centres.

n July, 1954, the approval of the Minister was obtained to the City Council's osal to provide short-term care for mental defectives in cases of urgency, than in mental deficiency hospitals ; since that date use has been made of Orchard Dene " Short-stay Home, Rainhill, near Liverpool, administered ie Association, for the relief of families of mental defectives in times of stic crises. 10 children were so accommodated from July to December,

o-operation with the Mental After-care Association has been good and in the Association was able to provide convalescent accommodation for 9 hester patients discharged from mental hospitals.

ing of staff

he number of qualified staff employed in occupation centres has been ised by seconding to the National Association for Mental Health course ; 16 supervisors and assistant supervisors employed, 2 are recognized, on ids of experience, as being qualified, 4 hold the Diploma of the National iation for Mental Health and 1 is recognized as qualified on grounds of alent qualification.

ie recruitment of qualified staff continues to be extremely difficult and quently the Authority has had to appoint candidates without training, ie policy has been that of appointing persons with experience in dealing children.

addition to seconding one occupation centre assistant supervisor to the l National Association for Mental Health course, as mentioned in the ling section of this report, 13 members of the centres' staff attended the iation's one-day refresher course held in Manchester. It was also possible d the three occupation centre supervisors on a one-day visit to the Rudolph r School, Sunfield Home, Clent, Worcester.

o members of the staff, one duly authorized officer and one mental health attending a mental health course organized by the Department of Social istration of Manchester University.

visitors and social science students

in previous years, the Service continued to co-operate with Manchester rsity in giving practical and theoretical training in mental health to students he Department of Social Administration. Similar facilities were extended ent health visitors preparing for the examinations of the Royal Sanitary te.

students were given experience in district visiting, and visits to occupation s and hospitals were arranged.

hough these students were not pursuing specific studies in mental health uaintance with the administration and problems of a domiciliary mental service will serve to broaden the basis upon which the foundation of ture work will be built and may well provide future recruits for mental work.

The Mental Deficiency Acts, 1913–38

Ascertainment

A total of 149 new cases of mental deficiency were ascertained in the during the year ; of these 118 were subject to be dealt with under the M Deficiency Acts. The ascertainment and disposal of these cases is shown i following tables :—

Ascertainment of mental deficiency—

(a) new cases ascertained

	Education Act, 1944		Other sources	
	Section 57 (3)	Section 57 (5)	Subject to be dealt with	Not subject to be dealt with
Males	16	30	17	13
Females	18	19	18	18
Total ..	34	49	35	31

(b) disposal of mental defectives ascertained

Method of disposal	Male		Female	
	Under 16	Over 16	Under 16	Over 16
(*a*) Defectives found to be " subject to be dealt with "—				
Admitted to institution	2	9	1	9
Placed under guardianship	1	1	1	—
Taken to places of safety	—	—	—	—
Placed under statutory supervision	13	37	14	28
Died or removed from area ..	—	—	2	—
Action not taken by end of year..	—	—	—	—
(*b*) Defectives not at present " subject to be dealt with "—				
Placed under voluntary supervision	1	12	—	18
Later found not to be defective ..	—	—	—	—
Died or removed from area	—	—	—	—
Action not taken by end of year..	—	—	—	—
Total	17	59	18	55

rms of care

2,452 mental defectives were known to the Service on 31st December, 1954. these 1,018 (41 per cent.) were under statutory supervision, 230 (10 per cent.) re under voluntary supervision, 1,182 (48 per cent.) were in institutions, 13 der guardianship and 9 in a place of safety.

ıardianship

In accordance with the City Council's policy to increase the use of ırdianship as a form of care for mental defectives, 5 further cases were placed der guardianship during the year. As 2 previous guardianship cases subseently proved unsuitable from the point of view of social adaptability for this m of care, they were transferred to mental deficiency hospitals, bringing the al number of guardianship cases to 13.

ıoval from supervision

Removals from voluntary supervision numbered 20, and 81 others were taken statutory supervision during 1954. Details of these removals are as ows :—

Removal of defectives from supervision

Reason for removal	Male		Female		Total
	From statutory supervision	From voluntary supervision	From statutory supervision	From voluntary supervision	
le of managing themselves their affairs	3	10	3	3	19
ferred to voluntary/statu- supervision	6	—	2	1	9
ferred to other authorities	15	1	8	4	28
ight of	—	1	—	—	1
.. ..	1	—	4	—	5
causes	19	—	20	—	39
Total	44	12	37	8.	101

rriage and children

Df the total number of mental defectives known to the Service, 4 males 5 females married during 1954. 3 defectives gave birth to children after riage and there were 2 illegitimate births to mental defectives during the .

upation centres

n the year 1954, the number of pupils attending occupation centres showed rther rise ; three centres located in the Ancoats, Victoria Park and henshawe districts are in operation, and it is hoped that work will shortly be ed on a fourth, which will serve the north of the City.

ıdance

ttendance at the centres is voluntary but every effort is made to encourage ıts to send their children regularly for training. The average daily dance throughout 1954 was 77 per cent. of the number of pupils on the ers.

The total number of pupils attending the occupation centres at the end 1954 was 223, an increase of 16 during the year but, the accommodation at centres having now reached saturation point, further admissions are depend on pupils ceasing to attend. At the end of the year there were 8 me defectives on the waiting list for admission to the centres.

Pupils at the centres have the same holiday periods as children at prim schools in the City.

Attendance of mental defectives at occupation centres

Occupation centre	Male		Female		To
	Under 16	Over 16	Under 16	Over 16	
Ancoats	15	7	11	5	3
Victoria Park	49	20	45	12	12
Wythenshawe	21	13	14	3	5
Number awaiting vacancies	3	—	4	1	
Total	88	40	74	21	22

Transport

Throughout the year children have been conveyed to and from the occupat centres in hired transport. Five Corporation buses are used, three by Vict Park and one each by the Ancoats and Wythenshawe centres, and pupils escorted by members of the centre staff. No charges are recovered for service.

Medical examination

A physical examination of each pupil attending the occupation centres carried out during the year by the Senior Medical Officer (Administrati 41 pupils were referred to their general medical practitioners for the treatm of minor ailments, and arrangements were made for 48 pupils to attend Manchester Dental Hospital.

Meals

Each pupil attending an occupation centre is provided with a hot mid- meal at a cost to the pupil of sixpence ; no charge is made to pupils wh parents are of poor financial means. Free milk is supplied to all pupils ur the age of 18 years.

Prior to 1954, the meals at Victoria Park were prepared on the premi whereas at Ancoats and Wythenshawe they were supplied by the School M Service of the Education Committee. In April, 1954, in order to improve quality and variety of meals provided at Victoria Park, arrangements were m for this centre to be supplied with mid-day meals by the School Meals Serv

The staffs assist in serving the meals and at all the centres the standar meals supplied has been most satisfactory.

Activities

The curriculum at the centres is framed to provide training in clean hal good manners, physical development and, where possible, a knowledge of sin manual occupations.

It is not possible in the smaller centres to arrange a satisfactory grading of pils because of the limited space available and storage difficulties in rented emises.

At Victoria Park, however, a system of grading in relation to both mental ainment as well as sex and chronological age of the pupils is in operation.

The subjects taught at the centres include habit and sense training, music d movement, table manners, domestic management, speech training, with dening and woodwork for the older boys and sewing and embroidery for the ior girls. Percussion bands form a popular and invaluable part of the ning.

A party of 26 pupils enjoyed a week's holiday at Rhyl in August, 1954, and ties and visits to the circus again formed happy features of the annual ristmas festivities.

Satisfactory reports on the centres were received from the Ministry of Health owing visits by an Inspector of the Board of Control.

nchester Jewish School for Handicapped Children

With the approval of the Minister of Health, the City Council have made a ncial grant to the work of this school. The grant is in respect of 5 mentally ective children, resident in Manchester, who have been admitted to the ool through the Mental Health Service, and is equal to the average annual per child of children attending the City's occupation centres.

The children receive normal occupation centre training, and the scheme has ved most satisfactory.

elopment

The approval of the Minister of Health to the erection of a further centre lackley has been received, and it is hoped that work on the building will mence in the very near future. This centre will serve the northern parts of City and will relieve the pressure on accommodation at Victoria Park Centre.

acy and Medical Treatment Acts

Notifications of persons alleged to be of unsound mind amounted to 702 ng the year and, of these, 537 were admitted to mental hospitals.

Lunacy and Mental Treatment Acts, 1890–1930

(*a*) ascertainment

Source of notification	Males	Females	Total
al medical practitioners	172	278	450
tals and clinics	49	75	124
Corporation departments	7	23	30
authorities	28	12	40
al public	19	24	43
sources	6	9	15
Total	281	421	702

(*b*) disposal

	Males	Females	Tota
Hospital admission—			
(*a*) observation	134	185	319
(*b*) voluntary	34	38	72
(c) temporary	—	—	—
(*d*) certifiable	53	93	14
Referred to other departments or agencies	13	17	3
No further action necessary	47	88	13
Total	281	421	70

(c) subsequent disposal of patients admitted to mental hospitals for observation

Disposal	Males	Females	Tot
Voluntary	44	59	10
Certified	51	96	14
Discharged	20	17	3
Died	4	6	1
Pending disposal	15	7	2
Total	134	185	31

(d) patients admitted direct into mental hospitals

	Males	Females	Tot
Voluntary patients	155	135	2

In addition, 60 patients (24 males and 36 females) were dealt with on
of other local authorities.

Prevention, care and after-care

Under this section no division between prevention, care and after-care
be made satisfactorily. To be constructive, this Service depends at all time
careful, personal work. It calls for a knowledge of psychiatric conditions
the appropriate use of statutory and voluntary social services, whilst cons
and diverse problems require skill and training in human relationships.

At present the Mental Health Service has two full-time psychiatric s
workers and, in an endeavour to play its part in remedying the serious shor
of these workers, the City Council has approved the recruitment of a tra
psychiatric social worker.

The Service has been fortunate in obtaining the services of a Consultant 'sychiatrist, Dr. Northage J. de V. Mather, on a sessional basis. This has roved a big step forward in the successful development of a mental health ervice that is to meet the requirements of the community. The fact that sychiatric consultation can now be arranged at the Town Hall is invaluable n meeting the demands made by the other municipal social services, who have rown increasingly aware of the help that this Department may be able to give hem in the mental health aspect of their work.

In the care and after-care of patients, there is continued close co-operation ith all the mental hospitals in the area, and the Mental Health Service team is dmirably placed to act as intermediary officers between the various hospitals nd clinics.

The burden of bad housing conditions on persons suffering from mental lness, or where such conditions are having a detrimental effect on a mental efective in the household, has been alleviated, in certain cases, by the award f medical priorities for re-housing.

The statistics relating to care and after-care are shown in the following ble :—

Care and after-care of mental illness

	Males	Females	Totals
mber of visits or interviews	605	1,008	1,613
moved from care	115	135	250
erred for medical report :—			
a) to general medical practitioner	10	8	18
b) to psychiatrist or clinic	22	39	61
rviews with other agencies, departments or mployers	117	208	325
Total..	869	1,398	2,267

VIEW OF THE SERVICE

ntal deficiency

The grave nation-wide shortage of beds in mental deficiency hospitals places increased burden on the local health authorities who are responsible for the e in the community of mental defectives. The more efficient the community e and the wider its scope, the less will be the demand for hospital accommo- ion.

With this in mind, the Health Committee, during 1954, approved in principle extension of types of care to be provided by the Mental Health Service. emes are at present being formulated for an adult occupation centre, viding training and sheltered employment for adult mental defectives, and y nursery for mental defectives who, because of gross disabilities, are unable ttend occupation centres or benefit from the training that they provide.

As stated previously in this report, use has been made of " Orchard Dene Short-stay Home, Rainhill, near Liverpool, for short-term care of ment defectives who could not be admitted on a temporary basis to a mental deficienc hospital. The use of this home has proved an efficient safety valve to ensur that parents have relief in cases of urgency from the task of caring for thei mentally defective children. The use of the home is, however, limited t children between the ages of 6 months and 12 years who are otherwise medicall fit and who are able to join in general activities without needing special individu care or too much individual attention.

At the present time, mental defectives not in these categories can only b accommodated if vacancies occur at mental deficiency hospitals because of th absence of patients on holiday or short-term licence. These cases are the mor difficult types of defectives, cases with the double handicap of ill-health an mental defect, with behaviour problems, and requiring constant nursing atte tion who, but for the universal bed shortage, would be in permanent hospit accommodation. In the case of older defectives, in many cases more robu and difficult to handle, an extra burden is placed on correspondingly old parents.

The Health Committee has taken the view that if such cases could b accommodated by the local health authority for short stays, the parents woul be able to look forward to an annual relief from the strain of constant supervisio and by feeling that, as a result of this relief, they could continue to look aft their children, it is possible that there would be fewer applications for permane hospital beds and a consequent drop in the waiting list for hospit accommodation.

The approval of the Minister of Health has been sought therefore to proposal enabling the Council to investigate the possiblilty of providing shor term accommodation in such cases and, if thought fit, to establish and mainta short-stay homes for the temporary care, for periods of up to two months, the mentally defective.

Prevention, care and after-care of mental illness

There is a great need in Manchester for a day centre and club to assist t rehabilitation of patients discharged from mental hospitals, and also to obvi the need for admission to hospital.

The principal aims of the centre would be as follows :—

(i) the prevention of relapses in discharged patients and their return hospital ;

(ii) the prevention of breakdowns which would necessitate the entry in hospital of psychiatric cases who have not been in hospital before a who, because of their condition, are not placeable in employmen

(iii) the eventual stabilization of both these types of patient in the worki community.

A large number of patients would benefit from attending the club. Beca of the nature of their illness, patients have often great difficulty in formi relationships and it would assist them to make human contacts and reg confidence in themselves.

The Health Committee has approved, in principle, the establishment such a day centre and club, and the approval of the Minister of Health has be sought.

HEALTH EDUCATION

It is the experience of the Department that the education of the public in uestions of healthy living is best achieved through personal contact made with eople by the field workers of the public health team—the medical officers, ealth visitors, midwives, mental health workers and sanitary inspectors, and hrough visits to the Department. These officers are conducting a campaign of ealth education in the course of their duties whether they are advising on roblems of child care or of housing conditions, or confirming the action taken y more enlightened persons on matters of hygiene arising in the home and this as continued effectively throughout 1954.

The work of the officers was supplemented by means of lectures, publica- ons and exhibitions, and the Department co-operated with organizations nterested in matters of health education of benefit to the public.

Departmental publications " Infectious Diseases " and " The Family Welfare ervice " were issued in addition to a number of pamphlets published by the entral Council for Health Education. A monthly distribution of 2,000 opies of the magazine " Better Health " was made, mainly through child welfare ntres, public libraries and school health clinics. Diphtheria immunization as publicized through advertisements in programmes and handbooks issued in nnection with the Wythenshawe Civic Week, Lancashire Amateur Athletic ssociation and the Roman Catholic and Church of England Whit-week ocessions. A pamphlet in the " Concilio et Labore " series on the work of e Department was issued by the Information Bureau of the Town Clerk's epartment.

An exhibition of data and appliances in connection with smoke abatement s staged for the benefit of the City Council in the ante-room to the Council amber, on Wednesday, 3rd November, 1954.

There was continued interest in the health services administered by the City uncil and numerous enquiries were made by students, either personally or correspondence. Lectures were given by medical practitioners and officers the Department to various organizations.

A summary of the educational work in connection with the child welfare tres and the Health Department is given below:—

(a) Social and business organizations. Lectures were given by members of the health visiting and sanitary services staff as follows:—twelve to Old People's Clubs ; ten to the St. John's Ambulance Brigade ; five to house-parents ; four to licensed houses' staff ; three each to the Women's Co-operative Guild and staffs of catering establishments ; and one each to the education section of a co-operative society, the Campaigners' Youth Movement, the Wesley Guild, the Young Wives Guild, Gorton Domestic Poultry Club and to the 18 Plus Group of Wythenshawe.

b) H.M. Prison. Two courses of lectures on mothercraft were given to women with young children.

c) Royal College of Nursing, Manchester Branch. A lecture on housing conditions in Manchester was given by the Chief Sanitary Inspector to the Sister Tutor Section of the Branch.

d) District Nursing Institution. Three lectures on environmental hygiene and one on insects and vermin were given to the Institution by a sanitary inspector.

e) Health visitors. Two lectures on the co-ordination of the sanitary inspector's work with the work of other sections of the Health Department were given to health visitors by a sanitary inspector.

f) Civil defence personnel. A sanitary inspector lectured to civil defence personnel on sanitation following an air-raid.

(*g*) Student nurses. Lectures and practical experience were arranged for student nurs from local hospitals ; 141 students attended two lectures and 200 attended one lecture the social aspects of disease ; two groups, totalling 337 students, each received a lectu on the work of the public health nurse ; 150 spent a half-day on districts with heal visitors ; 88 observed the work of an infant clinic at a child welfare centre ; two seni nurse students taking administrative courses on public health work in London spe two weeks in the Department.

(*h*) Student teachers. 31 visits of observation were made to infant or toddlers clinics a child welfare centre and an outline of centre work was given by the centre superintenden one student spent one day at a child welfare centre and another at a day nursery ; student from a missionary training college and one from a domestic science college ea spent a day at a child welfare centre.

(*i*) Students in social administration (Manchester University). The work of the Departme was discussed with a group of nine students, seven of whom spent a half-day each we for six weeks at a child welfare centre, one worked with the Welfare Officer for t unmarried mother for a day each week throughout six weeks ; a social worker studyi recuperative work and rehabilitation attended the Department to gain experience.

(*j*) University students (extra mural). Two lectures on smoke abatement were given the Senior Smoke Inspector to student groups.

(*k*) Princess Christian College students. A visit of observation was made to an infant cli at a child welfare centre by a group of six students.

(*l*) Nursery assistants. 41 nursery assistants paid visits of observation to child welf centres.

(*m*) Medical students. 78 students from the Department of Child Health, St. Mar Hospitals, attended at a day nursery and also observed the work of an infant clinic a child welfare centre.

(*n*) Doctors. Six medical practitioners studying for the Diploma in Child Hea examination attended a total of 29 sessions at infant clinics at child welfare centres. doctor who was proceeding to an appointment with another local authority attende child welfare centres to gain specialized experience.

(*o*) Public Works Congress, London. An address on smoke abatement was delivered the Public Works Congress meeting in London by the Senior Smoke Inspector.

(*p*) Visitors from overseas. Visits to the Department and departmental establishme were made by members of the medical and nursing professions from Australia, Swed Turkey, the U.S.S.R. and the West Indies.

AMBULANCE AND TRANSPORT SERVICE

Ambulance Service

Introduction

The Manchester Ambulance Service has continued to operate in accorda with the provisions of Section 27 of the National Health Service Act, 19 as amended by Section 24 of the National Health Service (Amendment) 1949.

At the end of December, 1954, the ambulance fleet consisted of the follow vehicles :—

53 ambulances,

5 sitting case vehicles with a seating capacity of more than four se

6 sitting case vehicles with a seating capacity of four or less s

five of which were new vehicles obtained during 1954, as replacements for war vehicles. The average age of the fleet is six years.

These vehicles are distributed between the main Headquarters of the Ser at 81, Belle Vue Street, West Gorton, and five sub-depots. Vehicles f Headquarters also operate daily from two of the larger hospitals in the under the direct control of an Ambulance Service Sub-depot Supervisor. sub-depots are sited so as to give the maximum service in the shortest poss time, particularly with regard to accidents and emergency calls.

As a general rule, all requests for ambulance transport are received in the ntrol Room situated at the Headquarters Depot. These requests are dealt h either by vehicles from the Headquarters Depot or are telephoned by ect lines to the sub-depots according to the availability of vehicles and also he area of the City from which the ambulances have to collect the patients. three of the larger hospitals, direct contact between the Hospital Transport ice and the Ambulance Service Sub-depot Supervisor is maintained, at two ere an Ambulance Sub-depot is situated within the grounds of each of hospitals and at one where the Ambulance Service Sub-depot Supervisor ies out his duties in the Hospital Transport Office. Close liaison is thus ntained and duplication and overlapping of orders is eliminated.

rational

The demand for ambulance transport still continued to increase during 1954, icularly in connection with the transport of out-patients. This increased and resulted in an increase of 3.4 per cent. in the total mileage of the ulance fleet although there was a 10.8 per cent. increase in the total number atients carried.

Operational record

	1953	**1954**
Number of calls	97,721	101,681
Patients removed	158,364	175,552
Total mileage	846,023	875,056
Mileage outside Manchester (non-Manchester patients)	24,532	26,053

Analysis of removals

	1953	**1954**
Accidents	8,840	8,969
Infectious	10,178	13,948
General	139,346	152,635
	158,364	175,552

ous removals

429 cases of infectious disease other than tuberculosis were conveyed to rom hospitals, 1,783 of which were removed to Monsall Hospital. 783 ts suffering from various forms of tuberculosis were removed to sanatoria, tubercular out-patients were conveyed to and from clinics and sanatoria eatment and 5,607 hospital patients were moved from ward to ward for nation whilst in hospital.

e number of operational staff authorized was increased by two sitting-case ivers during the year and at 31st December, 1954, comprised the ing:—

Sub-depot supervisors	6
Ambulance drivers	67
Ambulance attendants	68
	141

this number, 124 or 88 per cent., had qualified or requalified in first aid the last three years. The remaining 17 were all attending first aid courses end of the year, being either new entrants into the Service or personnel ad last requalified in 1951.

The ambulance drivers, together with the drivers of the pool cars a commercial vehicles, were again entered in the National Safe Drivi Competition. The rules of this Competition require that, in order to qual for an award, the driver must have been free from any accident, however slig to person or property for which he was in any way blameworthy and this ru has been enforced rigidly in order both to maintain the value of the awards a also to maintain the high standard of driving which is expected from memb of the Ambulance Service.

76 drivers were entered for the 1954 Competition, of whom 67 ultimat qualified for awards, as follows:—

Bar to 20 years' brooch	4
Bar to 15 years' brooch	5
Bar to 10 years' medal	6
10 years' medal	3
Bar to 5 years' medal	12
5 years' medal	3
Diploma	34
	67

Hospital Car Service

The Hospital Car Service, which is operated by the local branch of Women's Voluntary Services on behalf of the Manchester Ambulance Serv has continued to augment the Ambulance Service and is mainly concerned the transport of walking cases to and from hospitals within the City for patient treatment and in-patients on discharge from hospitals within the Cit their homes. The operational record of the 17 drivers normally utilized as follows:—

	1953	**1954**
Journeys	8,244	5,962
Patients	18,083	18,147
Mileage	142,842	144,306

Civil Defence

Approximately 180 volunteers in the Ambulance Section of the Manc Division of the Civil Defence Corps were engaged in sectional training, completing their basic general training and a full first aid course as prescrib the Home Office.

A regular rota of attendance has been maintained at the main ambu depot in order to give the volunteers an opportunity of accompanying ambu crews on their normal duties, to observe the methods of handling and disp of patients.

Regular weekly meetings have been held at the following training cent

Chorlton Ambulance Depot, off Barlow Moor Road, Chorlton Hardy.

Civil Defence Training School, Livesey Street, Collyhurst.
Rooms over No. 558, Hyde Road, Gorton.

In addition, certain courses of training have been arranged at the Bell Street Ambulance Depot.

ctures have been given to the volunteers in the following subjects, and, appropriate, practical work has been carried out:—

- Revision of basic general training.
- First-aid.
- Care and maintenance of vehicles and equipment.
- Map reading.
- Erection of stretcher fitments.
- The control system in the damaged areas.
- The organization of the hospital services.

vo courses of driving instruction were arranged during the year to which lunteers were invited. Of these, 29 completed the course and passed riving examination. Opportunities have been given to all drivers in the n to have regular periods of driving practice, including visits to hospitals Manchester area, and three longer distance road navigation exercises were

veral small-scale exercises have been organized within the Section and ximately 60 volunteers participated in the large-scale exercise "Alpha" on 3rd October, 1954.

olunteers in the Section were pleased to co-operate with the Manchester nal Hospital Board in providing three ambulances, fully manned, and l volunteers to act as stretcher bearers, in the regional final of the mobile id unit competition held in Platt Fields park on Saturday, 12th June, 1954. Hospital Board reciprocated by staging an indoor demonstration by one ir mobile first aid units at the Chorlton Ambulance Depot in November.

s from 30th July, 1954, the Civil Defence (Casualty Collection) ations, 1954, came into operation. These Regulations impose upon y and county borough councils a duty to make plans in conjunction with mbulance Service to render first aid to untrapped stretcher cases and to provision for the carrying of stretcher cases from areas of damage essible to wheeled traffic to ambulance loading points. The full title of ection is now the "Ambulance and Casualty Collecting Section."

cipal Car Pool

ne Municipal Car Pool, which now consists of eight saloon cars, has nued to be administered and operated by the Ambulance and Transport e. These cars are used by the various committees and officials of the oration, and the mileage operated was 59,676, compared with a mileage of 3 in 1953, when 12 cars were being operated.

nercial vehicles

uring the year, two vans and one lorry were operated on Health Committee ons. The mileage run was 23,875, compared with 26,093 in 1953.

nization unit

e mobile immunization unit continued to operate during the year and led facilities for the immunization against diphtheria of children whose s could not bring them to child welfare centres. In addition, special were made to those areas where the percentage of immunized pre-school ildren was low. This vehicle, which is a converted single-deck omnibus, es from the Monsall Sub-depot and its mileage in 1954 was 8,347.

Disinfection service

A disinfecting station forms part of the Monsall Sub-depot and two stea disinfectors are used for the disinfection of clothing and bedding. In additio a formalin chamber is used for articles which cannot be subjected to the stea process. One of the commercial vehicles is utilized as a bedding van for tl collection of infected bedding, clothing, etc., and has been designed so as ensure that complete disinfection of the interior can be carried out befo being put into service for the return of disinfected articles. The disinfectic of 16,886 articles was carried out, this total consisting of the following :-

Blankets	1,769
Sheets	269
Pillows	711
Bolsters	10
Quilts	79
Mattresses	628
Beds	60
Articles of clothing	5,233
Library books	806
Bales of cotton waste	1,055
Articles of second-hand clothing for export	4,619
Miscellaneous	1,647
	16,886

The collection and return of these articles necessitated a mileage of 12,7 being undertaken by the bedding van.

Clinic

A clinic for the treatment of persons suffering from scabies and vermin conditions is situated at the Monsall Sub-depot, and the following figures sh the number of treatments given during the year.—

Scabies	652
Verminous conditions	594
School-children	378

Operating mileage

The total mileage operated by the various sections of the Ambulance Transport Service during 1954 was as follows:—

Ambulance service	875,056
Municipal Car Pool	59,676
Commercial vehicles	11,114
Bedding van	12,761
Immunization unit	8,347
	966,954

Compared with the 1953 total of 971,010 miles, this total shows a decre this is due, mainly, to the reduction in the number of pool cars operated.

LANGHO COLONY FOR EPILEPTICS

Dr. G. A. Thompson, Medical Superintendent

STAFF:

G. A. Thompson, M.R.C.S.(ENG.), L.R.C.P.(LONDON)	Medical Superintendent.
Miss E. J. Smith, S.R.N., R.M.N., R.M.P.A.	Matron.
S. A. C. Bunn, F.C.C.S., A.H.A.	Secretary-Steward.

On the 31st December, 1954, there were maintained in the Colony 282 ale and 284 female residents, of whom 208 were chargeable to the Manchester orporation and 358 to other authorities, as under:—

County boroughs	
Barrow-in-Furness	1
Birkenhead	1
Birmingham	9
Blackburn	22
Blackpool	11
Bolton	5
Bootle	2
Bradford	3
Burnley	12
Croydon	2
Dewsbury	2
Edinburgh	1
St. Helens	1
Ipswich	1
Leeds	6
Liverpool	23
Newcastle-on-Tyne	2
Oldham	8
Preston	8
Rochdale	3
Salford	25
Southampton	1
Southport	2
Stockport	2
Warrington	1
West Ham	1
Wigan	2
	157

County councils	
Cheshire	10
Durham	3
Durham (Children's Dept.)	1
Glamorgan	3
Hertfordshire	1
Lancashire	139
Leicestershire	1
Co. Londonderry	1
Middlesex	9
Monmouthshire	1
Northamptonshire	1
Salop	1
Staffordshire	1
East Suffolk	6
Surrey	7
Worcestershire	1
Yorkshire, North Riding	2
Yorkshire, West Riding	11
	199

Ministries	
Ministry of Pensions and National Insurance (Blackpool)	1
Ministry of Pensions and National Insurance (Manchester)	1
	2

Total: 358

The total number of epileptic seizures was 24,733 as follows:—

	Severe	Slight	Total	Average	Numbers of residents maintained
Males	8,227	7,419	15,646	59	282
Females	4,114	4,973	9,087	32	284
Totals	12,341	12,392	24,733	—	566

The classification of the incidence of seizures is as follows:—

	Males	Females
Status epilepticus	1	Nil
Increased incidence	65	11
Decreased incidence	62	78
No change	108	130
No seizures during the year	60	62

There were:—

	Males	Females	Totals
Admissions	38	28	66
Re-admissions	16	2	18
Discharges	43	19	62
Deaths	11	12	23

Treatments at other hospitals and clinics:—

	Males	Females
Blackburn Royal Infirmary:—		
Chest Clinic (Duke Street)	4	4
Ear, Eye, Nose and Throat Department	12	3
Fractures Department	41	33
Gynaecology Department	—	1
Hearing Aid Department	1	—
Medical Department	3	8
Orthopaedic Department	11	4
Physiotherapy Department	5	3
Radiotherapy Department	—	3
X-Ray Department	8	8
Skin Department	10	3
Surgical Department	10	7
Surgical appliances and garments	13	5
Transfers—for examination and treatment to:—		
Accrington Victoria Hospital	2	1
Artificial Limb Fitting Centre, Manchester	1	—
Christie Hospital, Manchester	—	1 (out-patient)
Royal Southern Hospital, Liverpool (Plastic Unit)	1 (out-patient)	—
Wythenshawe Hospital (Plastic Unit)	2	3
Transfers—for operative treatment to:—		
Royal Infirmary, Blackburn	7	6
Christie Hospital, Manchester	—	1
Transfers—for observation to:—		
Burnley General Hospital	1	—
Lancaster Moor Mental Hospital	2	—
Parkside Mental Hospital, Macclesfield	1	—
Prestwich Hospital, Manchester	—	1
Queens Park Hospital, Blackburn	—	1
Springfield Hospital, Crumpsall	2	—
Whittingham Hospital, near Preston	—	2

The employment of residents on 31st December, 1954, was as follows:—

	Males	Females
Domestic—the homes, etc.	98	50
Domestic—administrative block, etc.	10	12
Domestic—general kitchen	—	9
Laundry	2	18
Occupational therapy hut	28	—
Sewing room	—	23
Grounds, coal-yard and wood shed	45	—
Engineers' department	1	—
Shoemakers' department	3	—
Tailors' department	2	—
Works department	2	—
Light duties in the homes	14	42
Office and general stores	6	—
Assembly hall duties	3	—
Farms	18	—
Kitchen gardens	8	—
Sports field duties	3	—
Elderly, infirm or otherwise unemployable	39	130
Totals	282	284

ral remarks

In spite of the almost unprecedented bad weather that we have experienced ing the past twelve months and the resultant restrictions on outside activities, general health of the residents has continued to be very satisfactory, and re have been no epidemics of any kind. During the year all the new anti-vulsant drugs for the treatment of epilepsy have been tried and, if effective, e been incorporated into our methods of treatment.

Throughout the year, the Colony has been full to capacity, and there is a steady demand for any vacancy that may arise. All residents were upied as much as possible, and the female occupational therapy department mmenced in the Autumn) became quite a flourishing unit, although staffing iculties have impeded progress in this direction.

The staffing position is very serious, with a shortage of male staff and a at shortage of female staff; vacancies have been widely advertised but the onse has been poor, chiefly due to the competition of local industry.

its to the Colony

The Colony was officially visited by representatives of the Welfare Services mmittees of Birmingham, Blackburn, Dewsbury, Rochdale, Salford and rrington, and by a Senior Medical Officer and a Welfare Officer of the istry of Health.

rovements and work completed

Further additional items of furniture and bedding were obtained in tinuance of the policy of making the homes more comfortable for the dents. Work completed was as follows:—

Linoleum laid in homes 5 and 10.

Renewal of electric wiring in homes 5 and 7 (Hospital) and the artisans' workshops.

Steam kettles and hot plates installed in all the male homes.

Entertainments

A residents' dance and a film show have been held weekly and a mont concert party engaged.

A successful Sports Day was held in August, and we were very fortun in choosing a fine half day in a week of torrential rain. We had pleasure welcoming the members of the Residential Homes Sub-committee and ot Corporation officials; the usual races and side shows were held, and Councill J. McGrath, Chairman of the Sub-committee, kindly presented the prizes the numerous winners.

Our cricket team held its own in Division 1 of the North-East Lancash League after gaining promotion to it in 1953 although, again, the weather very disappointing on many fixture dates. One very enjoyable friendly cric match was held with the Blackburn Rovers' full first XI team; this proved be a very popular attraction. Blackburn Rovers' Lancashire Combinati football team played a number of their home matches on the Colony sp field, giving much pleasure to many of the residents.

The residents' annual trip to Blackpool was greatly enjoyed and, at Christm as well as a very full programme of entertainments and dances in the Colo an outing to a local pantomime show in Blackburn was arranged.

The Langho Colony Rangers and the Trefoil Guild have had a busy y attending the Ribble District Sports Day—carrying off a number of pri and County Parades, and paid friendly visits to other local Guide Compan On 19th March, 1954, Miss Joan Strong, J.P., M.B.E., Commissioner Extensions of the Girl Guide Imperial Headquarters, London, officially visi the Colony along with the County Staff, and highly commended the girls their Ranger work. A new interest had been created in the collection of u postage stamps, which they sent along to the People's Dispensary for Animals and also to the British Empire Cancer Campaign.

In conclusion, I would again like to thank the Matron, the Secretary-Stew and all members of the staff for their loyal and able assistance, and the memb of the Residential Homes Sub-committee for their unfailing courtesy.

DR. GARRETT MEMORIAL HOME

The Home, which contains 130 effective beds, affords recuperative seaside valescence for Manchester children between the ages of two and 15 years.

The sources from which children are referred to the Home are the School lth Service, maternity and child welfare centres, City hospitals and general dical practitioners. The majority of those admitted suffer from general /or nervous debility, some form of disease of the respiratory system, or emia.

Normally, 22 children are conveyed between Manchester and the Home, Conway, North Wales, by chartered omnibus once each week.

Admissions numbered 933 compared with 860 in 1953. Of the 936 children charged, 811 were recorded as " fit ", 106 as " improved " and 19 as equiring further hospital treatment "; 922 gained weight during their stay, ilst in the case of the remaining 14, no changes in weight were perceived.

The highest number of children in residence was 132 and the lowest 95 ; average number maintained was 115.23 ; it is estimated that another three ld be added to the latter figure in respect of children taken home by their ents prior to due discharge date ; 279 children were " discharged " in h circumstances.

There was one instance of a child leaving the Home without permission, as pared with two last year.

Illness among children, requiring nursing care in the Home, included 183 s of tonsillitis, infected throats or feverish colds and 37 cases of otitis media. children developed scarlatina and were transferred to the local isolation pital. Five children were transferred to the local general hospital ; two slight fractures, one appendicitis, and two for " observation." All the children recovered satisfactorily. One child was transferred to Abergele st Hospital.

The recruitment of qualified nursing staff improved slightly. Miss D. Owen, istant Matron, left on 5th March, 1954, to be married. Two staff nurses menced duty on 4th January, 1954. Miss E. Griffin, Sister, was promoted Assistant Matron on 1st April, 1954. Miss E. Simpson was appointed er on 25th July, 1954.

The staff of three wardens continued to provide and arrange entertainments the children by organizing out-door activities during the summer months ; ble handicrafts and indoor games are arranged during inclement weather and winter evenings ; cinema shows have been a weekly feature much enjoyed he children. The installation of a projection television set is a great asset is much enjoyed by the children.

No major alterations or additions have been performed during the year. or repairs to buildings and the preservation of interior and exterior decora- have been carried out satisfactorily.

The sitting-room provided for the resident staff is much appreciated.

MUNICIPAL HOSTELS

Women's: Ashton House, (Corporation Street, Ancoats)—
Miss S. J. Bayley, Manageress.
Men's: Walton House (Harrison Street, Ancoats)—
Mr. H. Stainton, Manager.

These two hostels provide accommodation, in separate cubicles, for 2 women and 464 men, and during 1954 the average nightly occupancy was 1 and 458 respectively; these were slight reductions on the figures for the previo year.

Ashton House was opened in 1910 on an improvement site allocated the Corporation for the purpose. The communal life of the Hostel cent round the reading room and smoke-room. Residents have facilities for cooki their own meals, or may purchase them ready cooked from the kitch A general-purpose shop is situated on the ground floor and is much patroni by the residents. Laundry facilities are available for residents who want wash their own clothes. Private property is kept in lockers provided. Th are four wash baths set aside for the exclusive use of the residents. The tender in recent years has been for the younger, able-bodied, residents to leave and tenants are now almost wholly old-age pensioners and persons in receipt National Assistance grants.

Walton House was opened in 1899 and, originally, provided accommodati in 353 separate cubicles but these proved inadequate and ten years later Hostel was enlarged to provide 454 cubicles ; in November, 1952, it further enlarged to its present size of 464 cubicles. The communal facilit are similar to those at Ashton House, but, in addition, a laundry is maintai and service is provided for the residents and for some other Corporati departments. A television set (projection type) was purchased in 1953 by residents themselves and has been placed in the smoke-room. It is a popu mode of entertainment and is augmented, from time to time, by conc given by local organizations.

During the course of the year, advancing costs made inevitable some incre in charges at both hostels and opportunity was taken to institute comprehen charges. Accordingly, the following charges were authorized by the Cou with effect from 9th October, 1954:—

Ashton House: Rent of cubicle 3s. a night or 19s. 3d. weekly.
Parcels storage 1d. per week.
Walton House: Rent of cubicle 3s. 3d. a night or 21s. weekly.
Parcels storage 1d. per week.

The special charges made previously for baths, lockers and early cal were discontinued and included in the rent fee.

A considerable amount of re-decoration has been carried out at both hos following rewiring of the electrical systems; these works have combined brighten the main rooms and corridors of both establishments.

Section 2

rsing Services Division

DOMICILIARY MIDWIFERY
INCIDENCE OF BLINDNESS
CARE OF MOTHERS AND YOUNG CHILDREN
DENTAL CARE
HEALTH VISITING
REGISTRATION OF NURSING HOMES
DAY NURSERIES
TUBERCULOSIS SERVICE
EPILEPSY AND CEREBRAL PALSY
HOME NURSING
DARBISHIRE HOUSE HEALTH CENTRE
CONVALESCENCE
HOME HELP SERVICE
FAMILY WELFARE SERVICE
VENEREAL DISEASES

NURSING SERVICES DIVISION

Dr. Alice I. Burke, Senior Medical Officer

dical—

Alice I. Burke, M.B., CH.B., D.P.H., Senior Medical Officer
Veronica May Bowman, M.B., CH.B., (resigned 30th November, 1954) .. ..
Muriel Jane Brayshay, M.B., CH.B. .. ..
Maureen Buckley, M.B., CH.B., B.A.O., L.M. .. ..
Annie Margaret Dawson, B.SC., M.B., CH.B., D.C.H., D.O. . .
Harold Diggles, M B., CH.B. .. ..
Florence Maud Duckworth, M.B., CH.B. .. ..
Rosaline Howat, M.B., CH.B. . .. .
Gwendoline Mary Elsie Keevil, M.B., B.S., D.C.H. .. ..
Williams Lees, M.B., CH.B., M.R.C.S., L.R.C.P., D.OBST.R.C.O.G.
Helen Elizabeth Mair, M.B., CH.B. (resigned 30th November, 1954) .. ..
Lydia McMurdo, L.R.C.S., L.R.C.P. .. ..
Barbara Joyce Nathan, M.B., CH.B., M.A., D.OBST.R.C.O.G. . .
Dorothy Elizabeth Margaret Thomas, M.B., CH.B., D.OBST.R.C.O.G. .. ..
Alice Ruth Eveline Widdows, M.B., CH.B., D.OBST.R.C.O.G. (resigned 31st December, 1954) .. ..

} Medical Officers

rsing—

Eileen A. Lamb, S.R.N., S.C.M., M.T. DIPLOMA—Non-medical Supervisor of Midwives.
Evelyn L. Gowing, S.R.N., S.C.M., H.V. CERTIFICATE—Superintendent of Health Visitors.

—

Charles A. Hay, M.B.E.—Chief Administrative Assistant.

DOMICILIARY MIDWIFERY SERVICE

he staff establishment of domiciliary midwives comprises a non-medical visor and 2 assistants, 67 district midwives, 6 special maternity nurses, and mature baby nurses, all of whom are employed by the local authority.

addition, there are 12 domiciliary midwives employed in St. Mary's ital Extern Service, and 5 midwives in the service of the Manchester ct Nursing Institution. These two bodies employ midwives on an agency on behalf of the City Council.

vision of midwives (*Midwives Acts*)

otices of intention to practise during 1954 were received from 292 ives.

Sources of notices of intention to practise

icipal wives	Employed on an agency basis	Independent midwives	Private maternity nurses	Institutions	Total
76	27	5	7	177	292

is number compares with a total of 278 notices received during 1953.

e non-medical supervisors made a total of 758 visits during 1954 as s :—

Inspections at midwives' homes	225
Visits to confinements and nursings	300
Visits to ante-natal clinics	64
Special visits to midwives (sickness, etc.)	58
Investigations, patients' homes, pyrexia, etc.	74
Hospitals and nursing homes	36
Coroner's court	1

Training of midwives

The City Council participates jointly with St. Mary's Hospitals in a sch for training pupil-midwives. 26 municipal midwives and 2 midwives of Mary's Extern Service are approved by the Central Midwives Board for Pa training.

28 pupils were trained during the year, 25 of whom were successful in pas the Board's examination.

Eight municipal midwives attended the post-graduate courses of the R College of Midwives during the year, at London, Bristol, Birmingham Oxford. A series of 6 lectures was given in Manchester during the wi months, the average attendance being 84 midwives.

Transport

Motor cars are owned by 33 municipal midwives and they are reimbu for mileage at the authorized rates. Midwives without cars are able to ob transport day or night on application to the Health Committee's Ambul and Transport Depot.

Ante-natal care

Midwives hold ante-natal clinics at 23 of the municipal welfare centres they made 2,866 attendances for this purpose.

The services of a medical officer are available if required at each session

At 5 clinics there are arrangements for post-natal examination. attendances, owing to lack of demand dropped from 189 in 1953 to 63 du 1954.

Deliveries

The total number of births in the City during 1954 was 13,337, of which were home confinements attended as shown below :—

Attendances at domiciliary births

Municipal midwives		Queen's district midwives		St. Mary's district midwives	Independent midwives		Private maternity nurses
As midwife	As maternity nurse	As midwife	As maternity nurse		As midwife	As maternity nurse	
3,108	750	95	8	585	9	12	3

This gives a percentage of those confined at home of 34·3.

The percentages of previous years are as follows :—

1953	38.4
1952	39.6

There were 4,574 applications for the services of municipal midwives of these 669 were cancelled for various reasons.

Other duties which continue to make demands on the services of mun midwives include 813 visits to homes for investigation purposes and 2,567 to patients discharged from hospitals before the 10th day. This latter is an increase over the previous year when 1,719 such visits were paid. Pa discharged from hospital after 10 days are visited as soon as possible by a visitor.

he average number of cases attended by domiciliary midwives employed t or under agency arrangements with the City Council is as follows :—

Municipal midwives	61.23
St. Mary's district midwives	48.7
Queen's district midwives	20.6

cal aid

here were 1,907 requests for medical aid in accordance with the rules of Central Midwives Board. Of these, 118 were by midwives in maternity s having no resident medical officer, and the remainder were by ciliary midwives. Where medical aid was requested at domiciliary ements, in 1,189 cases a doctor had been booked, while in 600 cases a ife only was engaged.

ial feeding

ecourse to artificial feeding was notified in 591 instances—130 from iliary midwives and 461 from institutions.

esia

l municipal midwives are trained to administer gas/air analgesia and each sses the necessary apparatus. During 1954, 3,500 domiciliary patients ed this analgesia, 2,872 of whom were attended by municipal midwives.

hidine was administered to 2,547 patients, of whom 2,172 were attended nicipal midwives, 332 by St. Mary's district midwives, and 43 by Queen's midwives. The total for 1953 was 2,593.

al pyrexia

cases of puerperal pyrexia under the Pyrexia Regulations of 1951 were during 1954, the rate per 100 total births being 36.79. This is a decrease previous year, the rate then being 40.16. There were no deaths among o notified.

the 450 cases notified, 212 were due to sepsis, 149 to other causes, while e unclassified.

incidence of pyrexia is shown in the following table :—

Incidence of pyrexia

	Municipal midwives	Midwives acting as maternity nurses	St. Mary's district midwives	Queen's midwives	Institutions	General practitioners -no nursing attendance	Totals
ection of genital ct	5	19	19	—	159	—	202
ortions	—	—	—	—	7	3	10
ra-genital causes ..	1	21	13	—	114	—	149
classified	1	1	2	—	85	—	89
Totals.. ..	7	41	34	—	359	3	450

25 bortions occurred which were transferred to hospital, but were not e under the Puerperal Pyrexia Regulations, 1951.

Maternal deaths

There were 6 deaths during 1954 which were directly attributable to c birth, and one which was associated with childbirth.

The maternal mortality rate was 0.49, compared with 0.80 in 1953.

The 7 deaths which occurred were due to the following causes :—

Haemorrhage from ruptured ectopic pregnancy	3
Air embolism—attempted abortion	1
Obstetric shock—normal delivery	1
Post partum haemorrhage and shock	1
Mitral stenosis—left ventricular failure—(associated) pregnancy (undelivered)	1
Total	7

In addition, there were four other deaths in Manchester hospitals, the pati residing outside the City boundary, viz. in Fleetwood, Prestwich, Little Hu and Denton.

Four deaths, three due to ruptured ectopic pregnancy and one to attem abortion, occurred in women who had made no arrangements for pregnancy, or received any ante-natal care. All but one of these died at h The remaining deaths all occurred in hospitals.

Still-births

There were 447 notified still-births, which represents a percentage in rel to total births of 3.63.

The respective percentages for 1952 and 1953 were 2.50 and 2.70. 87 births occurred in domiciliary practice, and 360 in institutions.

Special nursing duties of maternity nurses

Six maternity nurses were employed until October, when one re Five were employed at the end of the year. Their duties include the ca pyrexial and other unsatisfactory conditions of mother or infant which considered undesirable for midwives to attend. They also attend pa discharged from hospital whose conditions are unsatisfactory. The n also assist in the nursing of premature infants.

The following summary of visits gives particulars of their work :—

Visits by maternity nurses

Reason for visit	*No. of*
Notified cases of pyrexia (nursings)	
Unsatisfactory condition of mother	2,
Abortions	
Infection in the home	
Unsatisfactory condition of infant	
Unsatisfactory skin conditions	
Premature infants	
Ophthalmia neonatorum	
Relief for midwives	
Pyrexia and other investigations	
Total	6,

igus neonatorum and other skin conditions

ven cases were notified during the year, 5 of whom were successfully d by the maternity nurses ; the two other infants were transferred to tal. 4 cases were notified by hospitals, 2 by Queen's district midwives and by a municipal midwife.

ified cases of skin eruption

e maternity nurses paid 738 visits to 71 cases of skin infection. These ferred to the Department by hospitals, health visitors and midwives. The er of cases visited in 1953 were 413. There has been an increase both in umber of notified cases of pemphigus and skin infections not notified h.

ure babies

ree specially trained nurses were employed until May for the care of ture infants in their own homes. Since May two nurses have undertaken ork with the assistance of the maternity nurses. They were responsible care of 474 infants during 1954.

Neo-natal mortality of premature infants according to birth weight

Weight	Survived	Died	Total	Mortality rate per cent
3 lb.	11	—	11	—
. .. .	53	—	53	—
. .. .	170	—	170	—
us	239	1	240	0·24
Total	473	1	474	

en the nurses ceased to attend, 82 infants were entirely breast fed, 45 nd complimentary, while 347 were artificially fed.

of cots

ially prepared and heated cost are available for use in the home. 34 ions for these were received during the year.

ia neonatorum and other eye conditions

e is an establishment of three ophthalmic-trained nurses for the care of ases referred to the Department.

sources of reference of such cases are shown in the accompanying table.

Cases of ophthalmia neonatorum and conjunctivitis in newly-born infants and eye defect in older children

	Legitimate	Illegitimate	Total
1. Ophthalmia neonatorum—			
(*a*) Notified by medical practitioners	52	4	56
(*b*) Notified by the Royal Eye Hospital ..	—	—	—
2. Conjunctivitis in newly-born— Reported by midwives :			
(*a*) Own cases	355	6	361
(*b*) Discharged from hospital before 14th day	49	2	51
3. Conjunctivitis and other eye defects in children over 14 days—			
(*a*) Reported by medical officers of child welfare centres	81	1	82
(*b*) Reported by health visitors	293	11	304
Totals	830	24	854

Place of treatment of cases of ophthalmia neonatorum and conjunctivitis in the newly-born

Number of cases attending Royal Eye Hospital:-		
In-patients	5	
Out-patients	27	32
Number of cases attended by own doctor		822
Total		854

Corneal infections—	
(*a*) Under 14 days..	1
(*b*) Over 14 days	1
Total	2

Swabs—	
Positive	5
Negative	19

Summary of cases of ophthalmia neonatorum and conjunctivitis in the newly-born

Number discharged as recovered	840
Number discharged with damaged sight	—
Number died from any cause	—
Number removed from district	—
Number still under treatment at end of year	14

Number of visits by ophthalmic nurses

(*a*) primary	854
(*b*) subsequent	4,755
Total	5,609

1 infant was still under treatment at the Royal Eye Hospital at the end o year for corneal ulcer due to ophthalmia neonatorum.

Premature babies and still-births

The following tables give particulars as to the survival of premature infants born alive at home and in nursing homes and hospitals in the City during 1954.

Particulars are also given regarding still-births.

1. *Number of premature live births notified (as adjusted by transferred notifications).*

(*a*) In hospital	628
(*b*) At home	283
(*c*) In private nursing homes	16
Total	927

2. *Number of premature still-births notified (as adjusted by transferred notifications).*

(*a*) In hospital	165
(*b*) At home	38
(*c*) In private nursing homes	8
Total	211

Weight at birth	Premature live births															Premature still-births		
	Born in hospital			Born at home and nursed entirely at home			Born at home and transferred to hospital on or before 28th day			Born in nursing home and nursed entirely there			Born in nursing home and transferred to hospital on or before 28th day			Born in hospital	Born at home	Born in nursing home
1 (1)	Total (2)	Died within 24 hrs. of birth (3)	Survived 28 days (4)	Total (5)	Died within 24 hrs. of birth (6)	Survived 28 days (7)	Total (8)	Died within 24 hrs. of birth (9)	Survived 28 days (10)	Total (11)	Died within 24 hrs. of birth (12)	Survived 28 days (13)	Total (14)	Died within 24 hrs. of birth (15)	Survived 28 days (16)	(17)	(18)	(19)
(a) 3lb. 4oz. or less (1,500 gms. or less)	65	29	23	9	3	6	9	5	—	—	—	—	—	—	—	70	18	4
(b) Over 3lb. 4oz. up to and including 4lb. 6oz. (1,500–2,000 gms.)	130	9	107	25	3	22	14	—	12	4	—	4	—	—	—	52	9	1
(c) Over 4lb. 6oz. up to and including 4lb. 15oz. (2,000–2,250 gms.)	137	2	126	35	3	32	5	1	2	5	—	5	—	—	—	23	3	1
(d) Over 4lb. 15oz. up to and including 5lb. 8oz. (2,250–2,500 gms.)	289	4	276	182	1	180	3	—	2	7	—	7	—	—	—	20	6	2
Not weighed..	7	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	2	—
Totals	628	44	532	252	10	240	31	6	16	16	—	16	—	—	—	165	38	8

Analysis of eye conditions of children over 14 days referred by health visitors and child welfare centres

	Brought forward from 1954	New cases	Carried forward to 1955
nctivitis (simple)	8	250	10
nctivitis (purulent)	1	10	—
mal obstruction	3	66	4
ocystitis	—	9	—
oleum	—	28	—
al nebula	4	—	2
oma	4	1	6
ct (congenital)	15	5	16
a	2	—	2
tive vision	18	5	17
phthalmos	4	—	1
gmus	4	1	7
hthalmos	1	2	3
halmos	1	—	1
al opacity	—	—	—
lental fibroplasia	18	3	21
atrophy	3	—	2
s	1	—	1
al ulcer	1	2	2
oid retinitis	1	—	1
osis	—	1	1
aritis	—	3	3
Total	85	386	90

children attained the age of 5 years and were discharged by the Department referred to the Senior Medical Officer, School Health.

INCIDENCE OF BLINDNESS

(National Assistance Acts)

he information contained in Part A of the following statement, which is e form requested by the Minister of Health, has been supplied by the Welfare Officer of the City Council's Welfare Services Department:—

A.—Follow-up of registered blind and partially sighted persons, 1954

	Cause of disability			
umber of cases registered during the year respect of which paragraph 7 (C) of orms B.D.8 recommends:—	Cataract	Glaucoma	Retrolental fibroplasia	Others
(*a*) No treatment	44	20	1	71
(*b*) Treatment (medical, surgical or optical)	53	16	—	44
umber of cases at (i) (B) above which on llow-up action have received treatment	39	14	—	41

B.—Ophthalmia neonatorum

(i) Total number of cases notified during the year	56
(ii) Number of cases in which:—	
(*a*) Vision lost	Nil
(*b*) Vision impaired	Nil
(*c*) Treatment continuing at end of year	Nil

Cases of retrolental fibroplasia among premature infants	3
Cases of congenital cataract	5
Number blinded by glaucoma who had not received treatment	Nil

CARE OF MOTHERS AND YOUNG CHILDREN

Welfare centres

The number of centres for mothers and young children remains the sa as for the previous year, namely, 26 provided by the Health Committee an voluntary centre at the Holy Name School. Of the premises in use, 7 owned by the Corporation, 18 are rented, and 1 centre is held at the Duch of York Hospital for Babies. Most of the rented premises are school buildi belonging to churches.

Development of residential areas in Wythenshawe has caused increas concern at the lack of clinic facilities in areas where they are considered to most desirable. It has not been possible to provide additional facilities Wythenshawe, but progress has been made in the negotiations for the erect of buildings which will combine maternity and child welfare and school clin

Clinics

Weekly clinics are provided as follows :—

Infants	67
Toddlers	26
Ante-natal	34

Medical officers are in attendance at the sessions with the exception which are taken by health visitors only, and 3 ante-natal clinics where midwi are in attendance. Doctors and midwives attend at 26 ante-natal clin Post-natal examinations are undertaken at ante-natal clinics. Two cen afford treatment for venereal diseases in mothers and children.

Physiotherapy

Physiotherapy is provided at 21 centres. This service has been seve handicapped by the lack of qualified physiotherapists able to undertake work and is not so extensive as is considered desirable. Sessions incl remedial exercises for children of 2 to 5 years who have postural defects, mi deformities and either general or local poor muscular tone.

Ante-natal and post-natal exercises are provided to improve the conditio mothers before and after confinement.

Treatment by artificial sunlight is afforded at 5 welfare centres for expec mothers suffering from various discomforts of pregnancy and others ha post-natal debility and rheumatism. Children receive treatment for ade boils, asthma, rickets, anaemeia, malnutrition and spastic paralysis.

Domestic science classes

Cookery classes have been continued in the welfare centres during the Demonstrations and practical instruction in food preparation and food va were given at 8 centres. Sewing classes were provided at 10 centres.

Attendances, etc.

Attendances at sessions held during 1954 with comparable figures for are shown below :—

Infant and toddlers' sessions :—

Number of children on centre registers at—	31st December, 1954	31st Decembe
Under 1 year	5,759	6,307
1 to 5 years	10,184	11,596
Total	15,943	17.903
	1954	1953
Attendances made by children—		
Under 1 year	100,251	104,537
1 to 5 years	45,981	49,967
Total attendances ..	146,232	154,504

Distribution of Welfare Foods

nte-natal sessions :—	31st December, 1954	31st December, 1953
Number of new attenders	5,942	6,914
Total number of attenders	8,089	9,467
Number of attendances	35,087	39,974
ost-natal sessions :—		
Number of attenders	402	598
Number of attendances	409	608
hysiotherapy sessions :—		
Ante-natal exercises—		
Number of attendances	2,184	2,820
Post-natal exercises—		
Number of attendances	132	347
rtificial sunlight treatment :—		
Number of attenders—		
Children	630 } 635	737 } 739
Adults	5	2

nor ailments

160 children under five years of age were referred by the medical officers at lfare centres to school clinics for the treatment of minor ailments. Children o fail to attend or cease attending before treatment is completed are ollowed up ” by health visitors who stress the desirability of treatment.

The type of ailment and number of children referred for treatment is shown ow.

Number of children referred for treatment of minor ailments

Squint	118
Other eye affections	3
Otorrhoea	4
Other ear affections	1
Impetigo	19
Other skin affections	2
Miscellaneous	13

lfare foods

The services provided for the issue of welfare foods at the maternity and ld welfare centres to mothers and children as part of the Authority's duty provide for the care of expectant mothers and nursing mothers and young ldren, were expanded by the taking over of the distribution of national lfare foods from the Ministry of Food, on 28th June, 1954.

The distribution of welfare foods is undertaken under Section 22 of the ional Health Service Act, 1946, and the scheme was amended to include ional dried milk, orange juice, cod liver oil and vitamin A and D tablets, ied under the Ministry of Food arrangements.

In addition to the existing facilities at the maternity and child welfare centres, ribution centres for national welfare foods only are provided.

Propriety brands of welfare foods are supplied free in necessitous cases on recommendation of the centre medical officer. The cost in 1954 was 8.

ntary workers

37 voluntary workers made 1,074 attendances at welfare centres during the . Their useful assistance is much appreciated.

Mothercraft teaching exhibition

Demonstration material is available in the Department to supplement ta given by health visitors at welfare centres and for other lecture purposes. T material includes models, posters etc., concerning nutrition, child health, pl clothing and prevention of accidents in the home.

The exhibition also includes examples of work done by mothers attendi handicraft classes at welfare centres and at the Health Committee's welfa hostel, Knowle House. Where mothers need practical help in making clot they are urged to attend the sewing classes held at various welfare centres.

Mothers' evening clubs

There are evening clubs at Cheetham and Northenden Maternity and Ch Welfare Centres which are used for the purpose with the Health Committe consent.

The object of these clubs is to allow mothers who normally attend the cen to meet in the evenings, once a fortnight, in a happy social atmosphere. T activities of the clubs are educational and social including talks, discussio various demonstrations of a practical instructive nature, i.e., washing machin sewing machines, cookers, vacuum cleaners, etc., social evenings, film sh observation visits, picnics and Christmas parties. Both clubs have their o library and publish a news bulletin.

The committees and honorary officers are elected by the mothers.

The number of enrolled members is 64 at Cheetham and 50 at Northend

Contact is made between members of the two clubs by an interchange visits.

Children attending child welfare centres

Centre	On register, January 1st 1954			New attendances during 1954			On register, January 1st, 1955		
	0—1 year	1—2 years	2—5 years	0—1 year	1—2 years	2—5 years	0—1 year	1—2 years	2— ye
Abbey Hey	269	190	313	317	29	103	235	190	2
Ancoats	87	56	89	150	25	40	95	46	
Ardwick	262	130	237	338	49	139	235	146	2
Blackley	163	120	199	174	31	52	130	114	1
Burnage (Duchess of York)	179	114	62	233	17	30	187	123	
Cheetham	227	145	265	264	33	116	194	115	2
Chorlton-on-Medlock	230	147	169	268	49	94	172	135	1
Chorlton-cum-Hardy	298	242	365	[illegible]	33	112	313	197	3
Clayton	184	124	130	195	5	40	145	121	1
Collyhurst	345	199	352	445	45	173	320	166	2
Crumpsall	141	125	152	181	18	48	148	122	1
Didsbury	204	184	277	237	27	72	188	169	3
Gorton	305	176	238	381	26	138	306	161	
Harpurhey	246	168	217	286	18	74	231	174	
Higher Blackley	145	102	88	189	27	34	129	123	
Holy Name	104	80	109	145	19	37	85	59	
Hulme	182	115	194	171	25	65	126	86	1
Levenshulme	346	241	467	[illegible]	60	185	308	240	
New Moston	210	133	147	249	22	57	173	146	
Newall Green	323	288	647	437	74	351	250	191	
Newton Heath	245	197	376	[illegible]	20	140	232	146	
Northenden	308	241	498	348	47	241	244	185	
Openshaw	304	222	[illegible]	402	36	97	[illegible]	191	
Rusholme	307	254	403	493	56	147	337	197	
Sharston	228	194	287	297	48	116	207	[illegible]	
Hart Road, Fallowfield	146	125	189	183	18	39	144	112	
Withington	319	223	313	340	33	118	282	211	
Total 1954	6,307	4,535	7,061	7,812	890	2,858	5,759	4,001	6,
Total 1953	6,019	4,467	7,288	8,413	[illegible]	3,385	6,307	4,535	7,

rseries and Child Minders Regulation Act, 1948

At the end of the year there were 5 persons registered as child minders to e for a total of 39 children. Two persons applied for registration during year.

Two factory nurseries are registered under the Act and they provide ommodation for 60 children.

One voluntary nursery is also registered under the Act with accommodation 40 children. The City Council subsidizes the maintenance of this nursery der powers contained in Section 22, National Health Service Act, 1946.

y minded children

Unless a person concerned expresses a wish to be registered under the t, that person is not registered unless she looks after three or more children. e number of such approved day minders is 3. The number of children h the day minders is 6.

All persons and premises registered under the Act are visited regularly by nedical officer and a health visitor on the staff of the Department and a health itor makes routine visits to all children under 5 years of age who are known be day minded.

re of illegitimate children and their mothers

The departmental arrangements for the care of illegitimate children and ir mothers is under the supervision of a health visitor specially appointed these duties. They include investigation of cases, advice and assistance, and angements in connection with the Health Committee's hostel at Knowle use, Handforth.

During the year full time assistance in these duties was given by a health itor from the general health visiting staff.

Cases are referred by officers of the Health, Children's and Welfare Services partments, general medical practitioners, hospital almoners and social workers voluntary organizations.

The following particulars indicate the work of the staff during the year and nparison with the previous year.

		1954	1953
(1)	Office interviews	1,363	1,155
	Home visits	583	555
	Visits to hospitals	102	77
	Visits to Knowle House	92	76
	Visits to other hostels	5	3
	Interviews—social workers and health visitors	877	647
	Attendances at Magistrates' Courts	97	88
	Visits to Mayfield House	—	3
	Total visits and interviews	3,119	2,604
(2)	Health visitors' records dealt with	3,035	3,093

(3) Number and classification of persons dealt with during the ante-n period with results of confinement :—

	Live births	Births pending	Still-births	Mis-carriages	Not pregnant
Single	140	39	9	1	2
Married	34	12	—	—	—
Widow	7	1	1	—	—
Divorcee	7	1	—	—	—
Parents married before birth of baby ..	—	6	—	—	—
Mother removed	—	13	—	—	—
Totals	188	72	10	1	2

(4) Number of mothers dealt with who have had illegitimate childr 718.

(5) Illegitimate children :—

Total number dealt with by Welfare Officer—883, comprising

272 children of mothers seen in post-natal period only.

188 children of mothers seen in ante-natal period during 19

50 children of mothers seen in ante-natal period during 19

373 children whose cases were reinvestigated or carried forw from previous years.

Particulars of illegitimate children remaining with their mothers

Mothers	In lodgings or absorbed into family	With mother and putative father	With mother in a hostel	Parents subse-quently married	Removed from Manchester	No trace	Deaths
Single	341	79	10	15	23	10	4
Married	115	51	1	—	4	3	3
Widow	10	5	—	—	—	2	1
Divorcee	14	10	—	1	1	2	1
Totals	480	145	11	16	28	17	9

Particulars of illegitimate children apart from their mothers

Mothers	With adopters	With relatives	With foster mothers	Boarded out by Children's Committee	In residential nurseries (Children's Committee)	In residential nurseries (private)
Single	46	23	12	3	13	12
Married.. ..	15	6	8	4	7	8
Widow	1	—	1	—	1	1
Divorcee ..	3	2	1	—	—	1
Totals ..	6,	31	22	7	21	22

The action taken by the Welfare Officer as regards cases referred to the partment was as follows :—

Accompanied mothers and babies and expectant mothers to hostels, hospitals and residential nurseries	99
Admissions arranged to—	
Knowle House Hostel	109
Voluntary hostels	10
Ante-natal care arranged	29
Cases referred to—	
Children's Department	111
Welfare Services Department	14
Mental Health Service	5
Poor Man's Lawyer Association	7
National Assistance Board	43
Probation officers	5
Catholic Moral Welfare Council	41
Catholic Adoption Society	24
Diocesan Council for Moral Welfare	10
Manchester and Salford Methodist Mission	8
National Society for the Prevention of Cruelty to Children	12
Manchester Employment Exchange	9
Manchester and District Adoption Society	7
Other organizations	7
Assistance given—	
To book a hospital bed	29
To obtain a vacancy in a day nursery	26
To obtain legal advice	13
To find lodgings	10
To secure employment	7
Provision of perambulators and cots from departmental sources	9
Provision of clothing from departmental sources	36
Provision of clothing from voluntary sources	25
Provision of clothing from National Assistance Board	18
Advice given *re*—	
Affiliation orders	175
Day nurseries	168
Hostel accommodation	133
Institutional accommodation	21
Private residential nursery accommodation	19
National Health Insurance benefits	136
National Assistance	94
Adoption	166
General matters	151

Regular visits were paid to 62 families requiring close supervision.

Affiliation order cases

81 applications for affiliation orders were heard by the Manchester M trates' Court and were dealt with as shown :—

Assistance given by	Orders granted
Welfare Officer	36
Welfare Officer and Poor Man's Lawyer Association	6
Welfare Officer and National Assistance Board	27
Welfare Officer and private solicitors	12
Totals	81

Mother and Baby Home, "Knowle House," Handforth

The primary reasons for admission to this home, which is administere the Health Committee, are :—

- (*a*) Mother and baby homeless, either because prior to her confine the mother had been living in an institution, hostel or lodgin had been engaged in residential employment.
- (*b*) Relatives unwilling to allow the mother to return home with illegitimate baby.
- (c) Overcrowded or unsatisfactory home conditions.

The Welfare Officer arranges for the admission of mothers and babies t home and is responsible for making suitable arrangements for them on discharge. The average stay was 5 weeks for ante-natal cases and 7 week post-natal cases.

The following table shows the admissions and discharges during the yea

	Carried forward from 1953	Admissions	Discharges	Number Home a end of t
Babies	5	95	88	12
Mothers	5	89	83	11
Expectant mothers	2	14	14	2
Convalescent mothers	—	6	5	1

The following particulars show the arrangements made for the care o 88 babies discharged :—

Babies remaining with mother—	
In home of relatives	16
In residential domestic employment	6
In lodgings	8
In institutional accommodation	13
In Ennismore Home, Eccles	2
Babies apart from mother—	
In homes of adopters	24
In private residential nurseries	13
In homes of foster mothers	1
Babies with convalescent mother—	
In own home	5

Recuperative centre

The Health Committee has an arrangement with the Community Cou Lancashire for the admission of mothers and their children to Brent Recuperative Centre, Marple, Cheshire. Maintenance charges are paid th provision in the City Council's care and after-care scheme under Section the National Health Service Act, 1946.

The primary reasons for recommending mothers for admission to :ntwood are :—

(1) Lack of training and experience in housewifery and child management.
(2) Ill-health and lowered vitality, due to too-rapid child-bearing, depressing surroundings and environment and, possibly, in the case of some mothers, malnutrition.
(3) Unsatisfactory home conditions, including lack of domestic facilities.
(4) Difficulties between parents, causing the mother to lose interest in her home and children.

Marked improvement in both mental and physical condition of the family evident after a stay in Brentwood. In most cases the mothers look more rt and happy, find pleasure in household tasks, and the children benefit greatly m the training given in the Centre. By frequent visits from the health visitor s hoped to maintain and still further improve the standard of living of these nilies.

Admissions to the Centre during 1954 comprised four mothers whose ages re from 23 years to 30 years, 1 child under 1 year, and 12 children from 1 to years.

One family, after a special request, remained for almost six weeks, and the ıer three varied from two to four weeks.

DENTAL CARE OF MOTHERS AND YOUNG CHILDREN

(Senior Dental Officer—James Byrom, L.D.S.)

1953 saw the start of a comprehensive service for patients attending the mmittee's child welfare centres, and 1954 has seen some building up of this. e statistics show a good improvement in a situation which cannot yet be arded as satisfactory. Lack of premises is quite as serious as lack of staff.

The Committee has agreed to adapt and equip a suite of 3 rooms at samond Street child welfare centre and premises are being sought in the eetham district to replace the room at present used in the Cheetham centre. gery accommodation is needed in Wythenshawe and in the North of the y. Some provision should be made for X-ray work as the scheme grows.

The work is undertaken by some of the school dental officers working in chool clinics and by the part-time dental officer engaged directly by the nmittee. The general anæsthetics are given by a medical practitioner and ned nurses are available. The mechanical dentistry for the fabrication of tures is done at the laboratory in Shakespeare Street.

In June, an oral hygienist took up duty and she works at present a quarter he time for the Committee and three-quarters for the Education Committee. duties of this type of ancillary worker are strictly limited and include ruction in oral hygiene, scaling and polishing of the teeth, and the topical lication of drugs to the gums. Training is also given in public speaking hat instruction may be given to school-children and mothers in the benefits sound dentition. New ground is being broken and sometimes, as with other ovations, the first results can be disappointing. This service is one of cation and great patience is called for before its results are apparent. As enists must work under the direct supervision of a registered dentist, means, in practice, that the particular place of employment must have at two dental surgeries, and consequently a room was equipped at Shakespeare et school clinic. The dental ancillary worker should not be confused with so-called New Zealand dental nurse who is trained to work alone and orm certain types of conservation treatment and extraction of teeth. The hygienist has treated 81 mothers and 10 young children, who have made and 15 visits, respectively, for treatment.

The following interesting clinical case is worth reporting. A child 4 years was brought to the Northenden clinic and it was found that the jaw had only a few broken roots of teeth and the back of the lower jaw like The roots were extracted and a full upper denture and partial lower de were subsequently fitted. Reports show that the young patient is che normally and obviously benefits by this artificial aid. The same dental c fitted dentures for a 5 year old boy last year.

The tables below give details of the year's activities, and, for compa the 1953 figures are shown.

(a) Numbers provided with dental care

		Number examined	Number needing treatment	Number treated	Nu r den
Expectant and nursing mothers	1954	925	920	911	
	1953	569	559	681	
Pre-school children	1954	1,832	1,770	1,884	
	1953	1,812	1,735	1,783	

(b) Forms of dental treatment provided

		Extractions	Anæsthetics		Fillings	Crowns and inlays	Scaling and gum treatment	Silver nitrate treatment	Dressings	Radiographs	Dent
			Local	General							Complet
Expectant and nursing mothers	1954	1,781	148	117	167	..	162	..	74	..	119
	1953	1,131	75	48	101	..	84	1	30	..	37
Pre-school children	1954	1.153	157	377	635	..	6	3,375	25	..	1
	1953	860	109	214	258	..	..	4,582	18	..	..

HEALTH VISITING

The duties of health visitors include advice and assistance to all me of the family and in particular they are concerned with the nutritio development of children under school age and the health and welfare of mothers. The teaching of mothercraft is a feature of the work of health vi and they have increasing functions in the care of ageing persons.

In December, 1954, the health visitors had under observation 58,938 ch under five years of age, compared with 63,698 for the previous year.

Notification of births

The total number of notifications adjusted by transfer was 12,318 comp 11,929 live births and 389 still-births.

Total registered births numbered 12,411 and of these 915 were illegit

It has been possible in 11,208 births (10,864 live births and 344 still- representing 90.3 per cent. of the total registered births in the City, to co the place in the family of each birth, and this is shown in the following

Full-time and premature births have been separated, the standard weight of 5½lbs. or under having been adopted in 1938.

Place in family	Live births				Live births		Still-births				Still-births		Live and still-births
	Legitimate		Illegitimate		**1954**	1953	Legitimate		Illegitimate		**1954**	1953	**1954**
	Full time	Pre-mature	Full time	Pre-mature	Per cent.	Per cent.	Full time	Pre-mature	Full time	Pre-mature	Per cent.	Per cent.	Per. cent.
1st	2,946	293	250	27	33.42	33.57	60	55	5	7	36.92	33.01	33.52
2nd	2,599	190	135	14	27.93	28.57	19	27	1	2	14.25	24.92	27.49
3rd	1,559	121	84	11	16.87	17.04	23	36	1	3	18.32	15.87	16.94
4th	907	67	59	7	9.89	9.59	13	21	2	—	10.47	10.68	9.90
5th	474	51	34	2	5.33	4.73	16	13	—	—	8.43	6.14	5.43
6th	253	31	13	6	2.88	2.89	5	4	—	2	3.19	4.86	2.89
7th	124	18	15	1	1.50	1.59	7	6	—	—	3.78	2.58	1.57
8th	80	11	4	1	.91	.79	2	3	—	—	1.45	.65	.93
9th	39	9	6	—	.51	.48	4	—	—	—	1.16	.32	.53
10th	21	2	3	—	.25	.35	3	3	—	—	1.74	.32	.29
11th	19	2	2	—	.22	.14	—	1	—	—	.29	—	.22
12th	11	—	—	—	.10	.15	—	—	—	—	—	.65	.10
13th	5	1	—	—	.06	.04	—	—	—	—	—	—	.06
14th	4	2	—	—	.06	.04	—	—	—	—	—	—	.06
15th	4	—	—	—	.04	.01	—	—	—	—	—	—	.04
16th	1	—	—	—	.01	.01	—	—	—	—	—	—	.01
17th	—	—	—	—	—	—	—	—	—	—	—	—	—
18th	—	1	—	—	.01	—	—	—	—	—	—	—	.01
19th	—	—	—	—	—	—	—	—	—	—	—	—	—
20th	—	—	—	—	—	—	—	—	—	—	—	—	—
21st	—	—	—	—	—	.01	—	—	—	—	—	—	—
22nd	—	—	1	—	.01	—	—	—	—		—	—	.01
Totals	9,046	799	606	69	100.00	100.00	152	169	9	14	100.00	100.00	100.00

10,520

344

10,864

It is interesting to compare the size of the average family and the age o mother of each new investigated birth in 1954 as compared with 1935 wher analysis was first made. Tables for these two years are as follows :—

(1) Age of mothers at birth of children during 1954 showing place in family of each bi

Age groups Years	Place in family																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	22
15—	410	67	11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
20—	1.687	877	294	92	19	7	3	—	—	—	—	—	—	—	—	—	—	—
25—	1,000	1,076	669	338	152	62	17	6	2	1	—	—	—	—	—	—	—	—
30—	411	689	569	369	221	125	70	41	20	6	3	—	—	1	—	—	—	—
35—	109	223	229	204	143	74	54	23	24	15	10	4	4	3	1	1	—	—
40—	26	51	62	69	48	39	25	28	9	9	10	4	2	2	3	—	1	1
45—	—	4	4	4	7	7	2	3	3	1	1	3	—	—	—	—	—	—
	3,643	2,987	1,838	1,076	590	314	171	101	58	32	24	11	6	6	4	1	1	1

(2) Age of mothers at birth of children during 1935 showing place in family of each bi

Age groups Years	Place in family																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	19
15—	294	25	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
20—	1,617	718	184	39	9	1	1	—	—	—	—	—	—	—	—	—	—	—
25—	1,419	1,054	540	253	97	44	19	2	2	—	—	—	—	—	—	—	—	—
30—	489	627	486	337	207	140	74	50	17	7	5	1	—	—	—	—	—	—
35—	118	288	235	194	159	132	111	88	65	30	16	6	4	1	2	—	—	—
40—	18	40	50	68	69	53	53	40	31	32	18	6	7	5	1	1	1	1
45—	—	2	—	5	9	6	4	1	6	7	5	5	4	3	1	—	—	—
	3,955	2,754	1,496	896	550	376	262	181	121	76	44	18	15	9	4	1	1	1

The 1954 births are further analysed to show the difference between legit and illegitimate births and live and still-births.

Age of mothers at birth of live children during 1954

(A) *Place in family of each investigated birth (legitimate)*

Age groups Years	Place in family																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18
15—	332	57	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—
20—	1,506	815	261	81	15	5	1	—	—	—	—	—	—	—	—	—	—
25—	915	1,015	622	307	138	56	13	6	2	—	—	—	—	—	—	—	—
30—	369	645	526	335	207	111	59	38	15	6	2	—	—	1	—	—	—
35—	97	207	204	187	120	68	49	20	22	11	9	4	4	3	1	1	—
40—	20	46	53	60	39	38	18	24	7	6	9	4	2	2	3	—	1
45—	—	4	4	4	6	6	2	3	2	—	1	3	—	—	—	—	—
	3,239	2,789	1,680	974	525	284	142	91	48	23	21	11	6	6	4	1	1

(B) *Place in family of each investigated birth (illegitimate)*

ge oups ears	Place in family												Total births
	1	2	3	4	5	6	7	8	9	10	11	22	
.. ..	68	9	1	—	—	—	—	—	—	—	—	—	78
.. ..	121	46	24	7	3	1	1	—	—	—	—	—	203
.. ..	51	44	27	22	8	3	3	—	—	—	—	—	158
.. ..	24	35	24	23	8	9	5	2	4	—	1	—	133
.. ..	9	13	15	7	10	4	3	1	1	—	1	—	62
.. ..	4	2	4	7	6	1	4	2	1	2	—	1	34
.. ..	—	—	—	—	1	1	—	—	—	1	—	—	3
	277	149	95	66	36	19	16	5	6	3	2	1	675

Age of mothers at birth of still-born children during 1954

(A) *Place in family of each investigated still-birth (legitimate)*

Age groups Years	Place in family											Total births
	1	2	3	4	5	6	7	8	9	10	11	
.. ..	6	1	—	—	—	—	—	—	—	—	—	7
.. ..	56	15	8	4	1	—	1	—	—	—	—	45
.. ..	33	16	20	9	6	3	1	—	—	1	—	89
.. ..	17	8	27	10	6	4	6	1	1	—	—	70
.. ..	2	3	9	9	13	2	2	2	1	4	—	47
.. ..	1	3	5	2	3	—	3	2	1	1	1	22
.. ..	—	—	—	—	—	—	—	—	1	—	—	1
	115	46	59	34	29	9	13	5	4	6	1	321

(B) *Place in family of each investigated still-birth (illegitimate)*

ge groups Years	Place in family					Total births
	1	2	3	4	6	
.. ..	4	—	—	—	—	4
.. ..	4	1	1	—	1	7
.. ..	1	1	—	—	—	2
.. ..	1	1	2	1	1	6
.. ..	1	—	1	1	—	3
.. ..	1	—	—	—	—	1
	12	3	4	2	2	23

Still-births

The number of still-births allocated to the health visitors for investig was 344.

Found children

The health visitors found 1,870 other children belonging to families w had moved into Manchester during the year. The year of their birth w follows :—

800	born	1954
390	,,	1953
292	,,	1952
223	,,	1951
165	,,	1950

Deaths

405 deaths occurred amongst children under 5 years of age.

The classification according to age is :—

Children under 1 year	349
,, 1—2 years	23
,, 2—3 years	10
,, 3—4 years	10
,, 4—5 years	13
	405

The distribution according to age of children who died under 1 ye as follows :—

Died under 1 day	Died 1 to 7 days	Died 1 week to 4 weeks	Died 1 month to 3 months	Died 3 months to 6 months	Died 6 months to 9 months	Died 9 months to 12 months
99	99	39	56	31	17	8

The following table gives mortality rates for the past 10 years ar children 1—5 years. This is based upon the number of live births f year. A table is also included showing mortality rates for measles and wh cough.

Infant and child mortality rate per 1,000 live births

and case mortality rates for measles and whooping cough

Infant mortality rate	Mortality rate 1—2 years	Mortality rate 2—5 years	Mortality rate 1—5 years	Total cases of measles		Total known cases of whooping cough	
				Cases	Mortality per cent	Cases	Mortality per cent
60·88	5·9	6·8	12·7	4,419	·27	3,277	1·28
53·59	5·6	3·8	9·4	6,736	·13	2,003	1·30
55·80	3·7	6·0	9·7	5,596	·14	1,835	1·36
63·71	3·7	3·9	7·7	3,800	·08	2,265	1·41
59·76	4·1	3·4	7·5	9,008	·23	2,308	·78
42·12	3·2	3·9	7·1	10,650	·16	2,612	·73
38·24	2·7	4·5	7·2	6,485	·11	2,749	1·05
37·87	2·7	3·4	6·1	9,798	·08	4,187	·41
35·29	3·1	2·0	5·1	8,953	·01	2,255	·13
34·28	3·2	2·8	6·0	10,035	·06	2,636	·30
30·53	1·8	2·9	4·7	6,798	·03	2,112	·19
29·47	1·9	2·8	4·7	9,844	·03	1,642	·24

e following table gives mortality rates for quinquennial periods 1911–1953, upon the number of live births for the year.

Infant and child mortality rate per 1,000 live births

Quinquennial periods 1911–1954

Quinquennial period	Infant mortality	Child mortality, 1—2 years	Child mortality, 2—5 years
915	133·13	45·0	35·5
20	104·51	34·9	34·3
25	95·85	34·2	23·9
30	87·88	26·2	20·9
35	77·34	18·3	17·6
40	70·81	11·3	11·3
45	63·85	6·3	8·1
50	48·34	3·3	3·8
.. ..	35·29	3·1	2·0
.. ..	34·28	3·2	2·8
.. ..	30·53	1·8	2·9
.. ..	29·47	1·9	2·8

Expectant mothers.

Health visitors also visited at the end of six months all mothers who
given birth to a still-born child or to a child who had died before reaching
age of one month, in order to ensure adequate ante-natal care should
subsequently become pregnant. 355 still-births and 255 neo-natal de
occurred in the City during 1953, and 1,147 special visits were made by the he
visitors during 1953–54 to those mothers. In this way, 45 expectant mot
who might require special care were brought to the notice of the Departm

Co-operation with School Health Service

A report on every child reaching school age and known, on the he
visitor's final visit, to be suffering from medical defect or to have an uns
factory family history, is referred to the School Health Service ; 555 s
summaries were sent during the year, classified as follows :—

Unsatisfactory condition of child	381
Unsatisfactory condition of family	1
History of tuberculosis in child	15
History of tuberculosis in family	152
History of rheumatism in child	5
History of rheumatism in family	1
Total	555

Defective children

(1)	Total number of defective children from 0—5 years on the register on 31st December, 1954		1,139
(2)	Number of those who were born during 1954		225
(3)	The number in (2) who recovered	1	
	The number in (2) who died	78	
	The number in (2) who removed out of Manchester.	11	
	Total number still on register on 31st December, 1954	135	
		225	
(4)	Number of children who had during the year reached the age of 2 years and were referred to the School Health Service in accordance with the Education Act, 1944, Section 34		348
(5)	The number of children under five years of age notified during 1954 as suffering from poliomyelitis		4
(6)	Number in (5) suffering from paralysis and still requiring treatment		4

Welfare of women and children on canal boats.

Manchester canal carrying companies do not allow women and childre
their boats, but women and children are still found on some of the " na
boats."

Arrangements are made for an official at the Docks to inform the H
Department when these boats are in the Docks and in addition the h
visitor makes an investigation each time she is in the area and during the
many visits are paid but on only two occasions were there boats in, with wo
and children on board.

Family 1. *Accommodation*—2 " narrow boats." Condition very clean.
This family had come to Manchester from Birming
Father—Not seen.
Mother—Looked young and healthy and had always lived on the
she could read and write and looked after her home and childre
Children—Boy 6 years ; looked healthy ; learning to read and wri
could swim. Girl 2 years ; progress appeared normal ; bright
child.

Family 2. *Accommodation*—2 " narrow boats." Condition fairly clean.
Father—Thin and chesty.
Mother—Thin type. Had only lived on the boats since her marriage.
Children—Boy 9 years who had recently been in hospital in Wolverhampton with pneumonia ; not a robust type.

Family 3. *Accommodation*—2 " narrow boats." Condition fairly clean.
Father.
Mother.
Children—Girl 9 years and a boy 8 years.
Children appeared healthy and were bright and active ; clothing was fairly satisfactory and they both attended school at intervals.

Family 4. *Accommodation*—2 " narrow boats." Condition clean.
Father.
Mother—Unable to read.
Children—Boy 12 years, boy 11 years ; girl 5 years and girl 4 years.
All children looked healthy. The boys attended school, but the girls had not yet started to attend.

Family 5. *Accommodation*—1 " narrow boat." Condition clean ; floor scrubbed.
Father.
Mother.
Children—One adult son ; boy 15 years, boy 11 years, boy 9 years ; one other boy, the twin of the 11 year old was fostered by a friend on another boat.
All children seemed well and healthy when seen by the health visitor.

Family 6. *Accommodation*—2 " narrow boats ". Condition clean.
Father.
Mother.
Children—Girl 13 years, boy 8 years.
These two children attend school when possible. The mother is fairly well educated and teaches the children to the best of her ability.

Family 7. *Accommodation*—2 " narrow boats." Condition clean.
Father.
Mother.
Children—Girl 14 years. Appeared well.
Has had very little education ; could write a little but could not read.

otal families—7.

otal children on board—17.

0—1 year ..	Nil	9—10 years ..	4
1—2 years ..	Nil	10—11 ,, ..	Nil
2—3 ,, ..	1	11—12 ,, ..	2
3—4 ,, ..	Nil	12—13 ,, ..	1
4—5 ,, ..	1	13—14 ,, ..	1
5—6 ,, ..	1	14—15 ,, ..	1
6—7 ,, ..	1	15—16 ,, ..	1
7—8 ,, ..	Nil	16+ ..	1
8—9 ,, ..	2		

of aged and infirm persons

pecial provision is made in the National Assistance Act, 1948, for securing ıecessary care and attention for persons who :—

(*a*) are suffering from grave chronic disease or, being aged, infirm or physically incapacitated, are living in insanitary conditions ; and
(*b*) are unable to devote to themselves and are not receiving from other persons proper care and attention.

449 individual visits were paid by health visitors to 1,578 persons whose mstances were reported to be unsatisfactory and were brought to the notice e Department, including 593 brought forward from last year.

ı dealing with these cases the Department continued to maintain close n with the Welfare Services Department, the Manchester District Nursing ution and hospital almoners.

Details follow with regard to the action taken to deal with the cases reporte and the comparable figures for 1953 :—

	1953	1954
Voluntary admissions to hospitals—		
Bridgewater	1	2
Crumpsall	129	116
Withington	167	207
Manchester Royal Infirmary	10	8
Ancoats	5	7
Royal Eye	2	1
Wythenshawe	5	5
Monsall	—	13
Stockport Infirmary	—	1
Jewish	4	3
Hope	—	1
Park	—	1
Ministry of Pensions	—	1
Christie	1	1
St. Thomas's, Stockport	—	1
Ladywell	1	1
Broughton House	—	1
Springfield	1	—
Davyhulme	1	—
Shaw Heath, Stockport	1	—
Northern	1	—
Patricroft	1	—
Jericho	1	—
Devonshire, Buxton	1	—
Salford Royal	1	—
Birch Hill, Rochdale	1	—
Admitted to—		
Little Sisters of the Poor	11	5
Private nursing homes	11	7
Mayfield House	1	—
Jewish Home for Aged	—	1
St. Joseph's Hospital	—	1
Lansdowne Nursing Home	—	1
Nazareth House, Prestwich	—	1
Transferred to—		
Mental Health Service	12	7
Welfare Services Department	99	79
Blind Aid Society	1	—
Tuberculosis Service	2	1
Sanitary Services Division	1	3
Died before admission to hospital	147	143
Recovered (nursed at home)	41	7
Removed—no trace	10	8
Removed to a relative's home	27	22
Removed outside the Manchester area	3	4
Compulsory removals under Section 47 of the National Assistance Act, 1948	16	32
No further action necessary	157	130
Carried forward at 1st January, 1955	593	756
	1,466	1,578
Total number of visits paid during period 1st January, 1953, to 31st December, 1953	5,308	—
Total number of visits paid during period 1st January, 1954 to 31st December, 1954	—	6,449

Particulars of persons dealt with under Section 47 of the National Assistance Act, 1948, and (Amendment) Act, 1951, during the year 1954

6 persons were still under supervision at 1st January, 1954.

Brought forward from 1952	2		
,, ,, ,, 1953	4		
Total		6	
New cases dealt with during **1954**		32	
Total			38

			Brought forward
1952 cases brought forward to 1st January, 1954		2	
Settled in accommodation during 1954 and renewal of Court Order not required ..	1		
Court Order still in force	1	..	1
1953 cases brought forward to 1st January, 1954..		4	
Settled in accommodation during 1954 and renewal of Court Order not required ..	2		
Recovered—discharged home	1		
Court Order still in force	1	..	1
1954 new cases		32	
Settled in accommodation during 1954 and renewal of Court Order not required ..	7		
Died	8		
Certified and transferred to mental hospital ..	1		
Recovered—discharged home	1		
Court Order still in force	15		15
Total brought forward			17

Summary of cases still in accommodation under a Court Order from 1952 and 1953 and those dealt with for the first time during 1954 :—

Settled in accommodation during 1954 and extension of Court Order not required.	10	38
Died	8	
Certified and transferred to a mental hospital	1	
Recovered—discharged home	2	
Court Order still in force	17	

Number carried forward to 1st January, 1955 17

Section 47—National Assistance Act, 1948, and (Amendment) Act, 1951—cases dealt with during 1954

Sex	Age	Reason for Council's action	Period named in the order of the Court	Type of accommodation to which the person was removed	Result of Council's action	Other information of interest	Ultimate result
F.	83	Living in insanitary conditions. Unable to devote to herself, and not receiving from others proper care and attention.	3 months	Part III Newholme	Court Order taken out 20th January, 1954.	Lived alone. Abusive to neighbours. Patient said she had relatives but would not disclose any name or address. Removal precipitated by the cottage in which she lived being flooded during heavy rain: removed by police the night prior to the date arranged.	Died 15th March, 1954.
F.	73	Living in insanitary conditions. Unable to devote to herself, and not receiving from others proper care and attention.	3 months	Part III Newholme	Court Order taken out 20th January, 1954.	The home became neglected and dirty after the death of a friend who shared the home. Patient very senile for her age and developed dirty habits. No near relatives.	Settled. Not necessary to renew Court Order, (10th July, 1954.)
M.	73	Living in insanitary conditions. Unable to devote to himself, and not receiving from others proper care and attention.	3 months	Chronic sick bed, Withington Hospital.	Court Order taken out 27th January, 1954.	Living in an attic. No proper bed. Patient ill but refusing to be admitted to Hospital. Son and daughter offered their father a home but the offer was refused.	Settled. No need to renew Court Order.
F.	73	Living in insanitary conditions. Unable to devote to herself and not receiving from others proper care and attention.	3 months	Chronic sick bed, Crumpsall Hospital	Court Order taken out 27th January, 1954.	Senile and frail. Lived alone and had a fall and was not found for a long time. Doctor advised admission to Hospital which patient refused. No one to give the necessary care at home.	Court Order to be renewed at appropriate date if still required
F.	80	Aged and in infirm person. Living in insanitary conditions. Unable to devote to herself, and not receiving from others proper care and attention.	3 weeks	Part III Springfield	Court Order taken out 29th January, 1954.	Living alone. Physical and mental condition rapidly deteriorated with severe wintry weather. Not getting proper nourishment regularly. Only known relative a niece living too far away to give adequate attention.	Settled. Not necessary to renew Court Order.
F.	72	Living in insanitary conditions. Unable to devote to herself and not receiving from others proper care and attention.	3 months	Chronic sick bed, Crumpsall Hospital	Court Order taken out 24th February, 1954.	Lived alone. Mentally confused and inclined to wander from home in inadequate clothing. Relatives— One sister, 80 years; one daughter with five children and again pregnant and not sufficient accommodation for her mother to live with her.	Court Order to be renewed at appropriate date if still required.

Sex	Age	Reason for Council's action	in the order of the Court	to which the person was removed	Result of Council's action	Other information of interest	Ultimate result
F.	85	Aged and infirm person. Living in insanitary conditions. Unable to devote to herself and not receiving from others proper care and attention.	3 months	Part III Springfield	Court Order taken out 4th March, 1954.	Refused to give address of relatives. Had been visited for a period of two years from this Department but seldon answered the door and only occasionally allowed the health visitor to enter the house. Supervision was also carried out by the local branch of " Good Neighbours."	Died 13th April, 1954.
F.	85	Aged and infirm person. Living in insanitary conditions. Unable to devote to herself and not receiving from others proper care and attention.	3 months	Part III Newholme	Court Order taken out 24th March, 1954.	Very senile. Mentally confused, particularly with regard to financial matters. No known relatives.	Settled—not necessary to renew Court Order (15th June, 1954).
F.	76	Living in insanitary conditions and unable to devote to herself, and not receiving from others proper care and attention.	3 months	Part III Newholme	Court Order taken out 11th March, 1954.	The only other occupant of the house was a sub-tenant aged 80 years.	Court Order to be renewed at appropriate date if still required.
F.	85	Aged and infirm person. Living in insanitary conditions. Unable to devote to herself, and not receiving from others proper care and attention.	3 months	Part III Newholme	Court Order taken out 24th March, 1954.	Severe malnutrition. Scald of foot	Settled—not necessary to renew Court Order (15th June, 1954).
F.	72	Aged and infirm person. Living in insanitary conditions. Unable to devote to herself and not receiving from others proper care and attention.	3 months	Part III Newholme	Court Order taken out 13th April, 1954.	Patient lived alone and was very confused mentally. She often wandered away from home for very long distances and was brought home by the police. Only relatives—one brother and sister : both elderly and the brother cared for the sister who was very senile.	Died in Newholme 4th May, 1954.
F.	75	Living in insanitary conditions. Unable to devote to herself and not receiving from others proper care and attention.	3 months	Chronic sick bed, Crumpsall Hospital	Court Order taken out 13th April, 1954.	Blind; bedfast; crippled; one ankle very deformed. Extensive ulceration of both legs and sore on right arm. No contact with relatives.	Court Order to be renewed at appropriate date if still required.
M.	94	Aged and infirm person. Living in insanitary conditions. Unable to devote to himself and not receiving from other persons proper care and attention.	3 months	Part III Newholme	Court Order taken out 21st April, 1954	Senile. Undernourished.	Settled—not necessary to renew Court Order (12th July, 1954).

Sex	Age	Reason for Council's action	Period named in the order of the Court	Type of accommodation to which the person was removed	Result of Council's action	Other information of interest	Ultimate result
F.	67	Aged and infirm person. Mentally confused. Unable to devote to herself, and not receiving from other persons proper care and attention.	3 months	Part III Newholme.	Court Order taken out 12th May, 1954.	Frequently bought clothing from rag and bone merchants. Son, living at the same address suffers from " Epilepsy."	Court Order to be renew at appropriate date if still required.
M.	82	Aged and infirm person. Living in extremely insanitary conditions. Unable to devote to himself and not receiving from other persons proper care and attention.	3 weeks	Chronic sick bed, Crumpsall.	Court Order taken out 25th May, 1954.	Suffering from malnutrition and severe ulceration of legs and feet, extending from the knees downwards.	Settled—not necessary to renew Court Order (15th December, 1954).
M.	79	Living in insanitary conditions. Unable to devote to himself and not receiving from other persons proper care and attention.	3 months	Part III Newholme.	Court Order taken out 9th June, 1954.	Subject to frequent falls and unable to get up after a fall. Lived alone.	Died in Withington Hospital 2nd August, 1954.
F.	61	Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention.	3 weeks	Part III Springfield	Court Order taken out 17th June, 1954.	An inebriate. Partially deaf; suffers from loss of memory. Brother with whom she shared the home collapsed with pneumonia and was admitted to hospital as an emergency, leaving no one to care for this sister. Only other relative elderly sister living in Glasgow.	Certified and transferred to mental ward one week after admission.
M.	85	Aged and infirm person. Living in insanitary conditions. Unable to devote to himself and not receiving from others proper care and attention.	3 months	Chronic sick bed, Withington Hospital.	Court Order taken out 21st July, 1954.	Living alone. Very unsteady on his feet. Home dirty and neglected ; patient developed dirty habits. Separated from wife, no contact with relatives. Refused to leave his home.	28th September, 1954. Discharged to care of friend.
M.	75	Aged and infirm person. Living in insanitary conditions. Unable to devote to himself and not receiving from others proper care and attention.	3 months	Chronic sick bed, Crumpsall.	Court Order taken out 21st July, 1954.	Undernourished, dirty and prone to falls. Right leg was amputated in 1940. Complaining of pain in lower abdomen ; general condition poor. Living alone. Required hospital treatment and was not willing to accept this.	Died 23rd December, 1954.
M.	76	Living in insanitary conditions. Unable to devote to himself, and not receiving from others proper care and	3 weeks	Chronic sick bed, Crumpsall.	Court Order taken out 17th September, 1954.	Patient very undernourished, also very deaf. Son living at same address known to Mental Health Service.	Died 2nd October, 1954, in Crumpsall Hospital.

		Reason for Council's action	in the order of the Court	to which the person was removed	Result of Council's action	Other information of interest	Ultimate result
M.	78	Living in insanitary conditions. Unable to devote to himself and not receiving from other persons proper care and attention.	3 months	Part III Newholme.	Court Order taken out 22nd September, 1954.	Neglected and not getting adequate diet. Refuses to let lodger wash or clean for him. 21st August, 1954, set fire to bed when lighting his pipe and match dropped on the bed. Has been in and out of Part III Accom. several times during past four years. Will not settle anywhere. When at home does not receive proper care and attention.	Court Order to be renewed at appropriate date if still required.
F	82	Living in insanitary conditions. Unable to devote to herself and not receiving from others proper care and attention.	3 months	Part III Newholme.	Court Order taken out 21st October, 1954.	Living alone. No known relatives. Becoming frailer and suffering from malnutrition. Had several falls.	Died 5th December, 1954.
F.	68	Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention.	3 months	Chronic sick bed, Withington Hospital.	Court Order taken out 27th October, 1954.	Living alone. No known relative. Malnutrition. Varicose ulcer.	Court Order to be renewed at appropriate date if still required.
F.	77	Living in insanitary conditions. Unable to devote to herself and not receiving from other persons proper care and attention.	3 months	Part III Newholme.	Court Order taken out 27th October, 1954.	Verminous. Living in lodgings.	Court order to be renewed at appropriate date if still required.
F.	72	Aged and infirm person. Living in insanitary conditions.	3 months	Part III Newholme.	Court Order taken out 17th November, 1954.	Patient a heavy drinker and as a result had frequent falls, two with serious results involving long stays in hospital. Patient very undernourished—all money spent on drink instead of food. Mentally confused.	Court Order to be renewed at appropriate date if still required.
M.	80	Aged and infirm person. Suffering from grave chronic disease.	3 weeks	Chronic sick bed, Bridgewater Hospital, Patricroft.	Court Order taken out 26th November, 1954.	Patient incontinent and seriously ill.	Died 1st December, 1954.
F.	90	Aged and infirm person. Unable to devote to herself and not receiving from others proper care and attention.	3 weeks	Chronic sick bed, Withington Hospital.	Court Order taken out 26th November, 1954.	Patient very senile.	Court Order to be renewed at appropriate date if still required.

Sex	Age	Reason for Council's action	Period named in the order of the Court	Type of accommodation to which the person was removed	Result of Council's action	Other information of interest	Ultimate result
F.	72	Aged and infirm person. Unable to devote to herself and not receiving from others proper care and attention.	3 weeks	Part III Newholme.	Court Order taken out 7th December, 1954.	Subject to falls. Risk of setting fire to herself. Marked oedema of feet.	Court Order to be renewed at appropriate date if still required.
F.	81	Living in insanitary conditions. Unable to devote to herself and not receiving from others proper care and attention.	3 weeks	Part III Newholme.	Court Order taken out 16th December, 1954.	Collapsed on 12th December, 1954. Mentally confused and undernourished. Was admitted to Ancoats Hospital, but nothing medically wrong discovered. Quite incapable of caring for herself.	Court Order to be renewed at appropriate date if still required.
F.	67	Living in insanitary conditions. Unable to devote to herself, and not receiving from other persons proper care and attention.	3 months	Part III Newholme.	Court Order taken out 22nd December, 1954.	Only relative, a son, who is mentally backward.	Court Order to be renewed at appropriate date if still required.
F.	78	Living in insanitary conditions. Unable to devote to herself ,and not receiving from others proper care and attention.	3 months	Part III Newholme.	Court Order taken out 22nd December, 1954.	Getting insufficient nourishment. Suffers from attacks of dizziness and prone to falls. Son incapable of caring for his mother. Patient refuses to consider admission to a home.	Court Order to be renewed at appropriate date if still required.
M.	85	Living in insanitary conditions. Unable to devote to himself, and not receiving from other persons proper care and attention.	3 months	Chronic sick bed, Withington Hospital.	Court Order taken out 23rd December, 1954.	Dirty. Refused to let landlady wash him or change his clothes. Bed covered with old coats and smelling strongly of urine. Not in touch with any relatives.	Court Order to be renewed at appropriate date if still required.

minous conditions and scabies

Persons treated for verminous conditions at Monsall Clinic

Year	Males adult	Females adult	School children	Children under 5	Total persons
.. ..	319	133	202	13	667
.. ..	507	116	276	22	921
.. ..	460	112	260	25	857
.. ..	382	106	181	26	695
.. ..	426	128	404	12	970

The Department has a scheme for supplying special steel combs at cost e to mothers and 16 steel combs were so distributed during 1954.

ies

The main source of notification of scabies is the School Health Service, but y cases are brought to the notice of health visitors, either as contacts of e notified by the School Health Service or as new cases.

The source and number of notifications received during 1954 and the eding years were as follows:—

Sources of notification of scabies

	1950	1951	1952	1953	1954
l Health Service	140	162	156	149	268
tals	6	8	21	30	26
al practitioners	130	107	100	118	145
e medical officers	4	4	9	1	8
n visitors	10	3	18	25	13
en's Department	—	1	—	—	3
ed voluntarily	99	50	93	42	75
vered at Monsall Clinic	17	16	33	17	28
ion Army	6	1	—	—	1
re Services Department	8	1	—	—	—
ry Services Division..	—	2	—	—	—
ry of Health	—	—	1	2	—
ss houses	—	1	1	—	—
urseries	6	—	—	—	4
C.C.	—	—	3	—	—
Total	426	356	435	384	571

The number of persons treated at Monsall Clinic is shown in the follo table:—

Treatment for scabies

Year	Males adult	Females adult	School children	Children under 5	Tot perso
1950	93	143	76	79	39
1951	61	88	66	63	27
1952	143	166	117	144	57
1953	161	164	131	95	55
1954	149	167	195	141	65

Scabies is treated by two applications of an emulsion of benzyl ben with an interval of from one to four days between the first and second treatm

The health visitor paid 410 visits to homes in which scabies occurr 1954.

The Clinic received 99 visitors during the year for purposes of rece instruction and information. The visitors included district nurses, st nurses, student nursery nurses and nursing cadets.

National Society for the Prevention of Cruelty to Children

The Department is again indebted to this Society for assistance in d with certain difficult cases. During the year help has been obtained by members of the staff from child welfare centres by personal contact, as w from the central office.

Training of student health visitors

An eight-months full-time course, approved by the Ministry of Heal arranged by the Manchester Municipal College of Technology in co-ope with the Health Department.

39 students were entered for the examination of the Royal Sanitary In in May, 1954. Of these, 35 were successful at the first attempt and the rem 4 students subsequently passed the examination.

26 students enrolled for the course which began in September, 1954, 6 sponsored by the City Council. Other students were sponsore neighbouring local health authorities.

The students also gain practical experience in other departments of th authority such as the School Health, Welfare Services and Children's D ments. Observation visits are arranged to supplement the knowledge gai lectures. The students are given an insight into the work of a rural visitor and spend some time in another county borough area outside Manc

An exhibition of the students' work was incorporated with the A Refresher Course for public health nurses and health visitors. The exhi included group theses and projects on a variety of subjects, includin cerebral palsied child, feet and footwear, the care of the aged, smokin crime and punishment. In addition garments and toys made at a min cost were on show.

Visits by health visitors, 1954

Type or cause of visit	Number
ry visits	12,990
quent visits	42,471
ren 1—2 years	28,140
ren 2—3 years	26,079
ren 3—4 years	22,163
ren 4—5 years	25,640
ren 5—14 years	2,201
al visits (not otherwise accounted for)	597
" out "	10,395
ns over 14 years	9,100
by centre superintendents—	
te-natal	114
t-natal	18
nts	2
). primary	9
). subsequent	23
Total	179,942
by epidemiology nurses	13,633
	193,575
ified visits included in the above total—	
ildren—removals	5,594
ildren—not seen	12,056
natal care—	
l-births, primary	221
l-births, subsequent, Ex.	62
l-births, subsequent, N.P.	197
natal deaths, Ex.	35
natal deaths, N.P.	122
ectant mothers, primary visits	1,071
ectant mothers, subsequent visits	232
rowding and sanitary defects—	
rcrowding	—
ects reported	21
cial visits	3
s—	
nary visits	280
sequent visits	130
nous conditions—	
nary visits	441
sequent visits	342
es—	
nary visits	8,522
sequent visits	3,359
man measles, primary visits	390
man measles, subsequent visits	174
ping cough—	
ary visits	1,776
equent visits	2,121
onia—	
ary visits	346
equent visits	126
aneous—	
tigations *re* infantile diarrhoea	18
and infirm cases	6,449
addresses—	
ts	217
tious diseases	10
tigation of V.D. primary	43
tigation of V.D. subsequent	66
Total	44,424
y student health visitors, included in total visits	2,607
r of child welfare centre sessions attended by health visitors	9,102

NURSING HOMES REGISTRATION

(Public Health Act, 1936, Sections 187–194)

No new nursing home was registered during the year; none was disconti

There was a total of 14 registered nursing homes at the end of the of which 4 were registered for maternity patients, 2 for maternity, m and surgical patients and 8 for medical and surgical patients.

Exemptions under Section 192 of the Public Health Act, 1936, were gr to 4 voluntary hospitals.

A medical officer made regular visits to all registered nursing homes d the year.

DAY NURSERIES

Accommodation was afforded for 1,406 children until 10th December, when Belfield Road day nursery was closed. 1,360 places were then av in 27 day nurseries.

The increase of 15 per cent. over place capacity was maintained throu the year and in addition 487 temporary places were found for children mothers had to be admitted to hospital. At the end of December, 1954, were 1,548 children on the register with an average daily attendance of During the year 1,454 children were admitted to the nurseries and 1,49 discharged. There was a waiting list of 1,573 children.

The charge for accommodation remained at 3 shillings per day wher parents are gainfully employed and 2 shillings and threepence where on parent is gainfully employed, except in certain circumstances where th Council have approved of a limited number of free places in special c stances.

5,198 routine medical examinations were carried out during the ye diphtheria and whooping cough immunization was available for all ch accommodated. All children are given a medical examination before adm to the day nursery.

A number of the nurseries were entirely free of infection during th while the remainder had cases of measles and chickenpox. Special preca continue to be taken to deal with the incidence of Sonne dysentery nurseries.

Fewer accidents have occurred in the nurseries during 1954 compare the previous year ; children receiving an injury receive immediate n attention.

Burglaries and malicious damage to day nursery premises were not so n as in previous years.

Nine of the 27 nurseries are approved by the Ministry of Health as t nurseries for the Certificate of the National Nursery Examination Boar interchange of students between the Health Committee and the Edu Committee is an integral part of the training. In 1954, 76 students to training course and with one exception all the students successfully con the course. 37 candidates were selected to attend the Supplementa Child Care Reserve Course, also two matrons attended the Nursery N Conference in London.

ıcilities have been continued for medical students, social science and public ıistration students to visit day nurseries for purposes of observation.

ırther improvements have been made to sanitary arrangements in day ries with a view to prevention of the spread of infection, and certain ural alterations have also been carried out.

TUBERCULOSIS SERVICE

(Care and after-care)

ıe Tuberculosis Service of the Health Department continues its work in reventive, care and after-care fields, whilst the Manchester Regional tal Board deals with the clinical aspects of the disease. The two services together in the same building and information is freely exchanged. This ement has very obvious advantages to all concerned. The building is actual hospital zone of the City, easy of access and immediately opposite Manchester Royal Infirmary. It is a centre for the clinical teaching of iseases to medical students and the instruction of student health visitors social side of the work.

organization in respect of the public health work provides for the ation of all the notified cases in the City and an adequate visiting staff in the instruction and education of patients both in respect of their alth and prevention of infection to others. It carries out the care and ıre work and keeps complete statistical records of the disease.

Health Committee pay an agreed proportion of the salaries of two tant Chest Physicians and one Senior Hospital Medical Officer for the hey do for the Health Department. The tuberculosis health visitors duty in the Chest Clinic and the Regional Hospital Board compensate alth Committee for their services.

the 31st December, 1954, 938 patients were undergoing treatment in ia and hospitals, and 70 were awaiting admission. There has been a n in the waiting list for admission, the comparable figure at the end of ing 89.

problem of the homeless chronic infectious case, who is unsuitable tment, is still causing concern. He frequently resides in lodging houses potential source of infection to those in contact with him. He also, , occupies hospital beds which could be devoted to the care of treatable The provision of hostel accommodation for this type of patient would ided asset to the work of the Service.

provision of home helps for those families who are in dire need of e in the home has again been of great service to the Department. elps are regularly X-rayed at the Chest Clinic as a precautionary measure, y volunteers are asked to work in tuberculous households.

er Section 28 of the National Health Service Act, 1946, the local y has provided for:—

ıe visiting and supervision of tuberculous patients and their families by 12 tuberculosis health visitors and 2 tuberculosis inspectors.

e loan of beds and bedding, free of charge, to assist treatment and to secure the isolation of the patient.

e provision of food grants and clothing to patients and their families whose incomes are below a set scale.

e loan of nursing requisites, free of charge, to patients on domiciliary care.

The free distribution of sputum boxes and flasks.
The disinfection of premises, bedding and clothing.
The loan of garden shelters.
The colonization of patients in village settlements.
Assistance in rehousing.
Financial advice in regard to entitlement to National Assistance, etc.
Co-operation with the Ministry of Labour in regard to the placing
selected patients in suitable employment.

Notification

Respiratory tuberculosis

In the year 1954 there was a decrease in the number of new cases respiratory tuberculosis notified, the figure being 672 as compared with 742 1953. The age group most affected was the 15–19 age group which had fewer cases than in 1953. 395 cases were notified amongst males, a reduct of 41 from the 1953 figure. Females numbered 277, a reduction of 29 from 1953 total.

Non-respiratory tuberculosis

The number of notified cases has increased from 93 in 1953 to 107 in 1 males numbering 48 and females 59.

Mortality

The deaths from respiratory tuberculosis numbered 188, this bein reduction of 10 from the 1953 figure.

The non-respiratory deaths totalled 21 as compared with 18 in 1953.

The following gives a brief summary of the work of the section :—

Tuberculosis health visitors:—	
Primary investigations	857
Domiciliary visits	21,957
Post-death visits	177
Home nursing:—	
Number of patients	21
Number of visits	378
Assistance to patients and families:—	
Food grants	90
Loan of beds and bedding	118
Loan of nursing requisites	49
Sputum boxes issued	34,445
Sputum flasks issued	36
Disinfections by Corporation:—	
Premises	525
Bedding	39
Housing applications:—	
Cases reviewed	480
Cases recommended	247
Families re-housed during the year	146

C.G. vaccination

The following table gives a record of the work of the B.C.G. Clinic since arch, 1951:—

Year	Number of B.C.G. sessions	Number of Mantoux and Jelly Patch Tests	B.C.G. vaccinations
1951	64	2,044	507
1952	99	3,093	881
1953	93	3,382	872
1954	89	3,536	777

In view of the fact that B.C.G. vaccination is virtually limited to contacts tuberculosis cases, the number of vaccinations is unlikely to increase.

Difficulty is still experienced in placing children suitable for vaccination in ommodation where they can be segregated from known cases of active erculosis for the required period, and this provision has still to be met.

The statistics for the year are shown in the following tables:—

Primary notifications of and deaths from tuberculosis

Comparative figures 1934—1954

(Rates per thousand of the population)

Primary notifications						General death rate, M/cr.	Death rate all respiratory diseases except tuberculosis (M/cr.)	Death rates, tuberculosis Manchester						Death rate, respiratory tuberculosis, England and Wales
Respiratory			Non-respiratory					Respiratory			Non-respiratory			
I. ate	F. Rate	Persons Rate	M. Rate	F. Rate	Persons Rate			M. Rate	F. Rate	Persons Rate	M. Rate	F. Rate	Persons Rate	
69	1·06	1·36	0·47	0·34	0·40	12·63	1·47	1·39	0·67	1·01	0·17	0·15	0·16	0·615
59	1·00	1·28	0·40	0·38	0·39	13·53	1·73	1·21	0·72	0·95	0·13	0·12	0·13	0·587
47	1·07	1·26	0·43	0·35	0·39	13·72	1·83	1·13	0·70	0·90	0·15	0·13	0·14	0·564
73	1·03	1·36	0·52	0·46	0·49	13·87	1·70	1·14	0·72	0·92	0·18	0·14	0·16	0·566
2	0·98	1·24	0·41	0·36	0·38	12·61	1·32	1·07	0·66	0·86	0·14	0·13	0·14	0·516
0	0·96	1·21	0·40	0·36	0·38	13·39	1·30	1·10	0·64	0·86	0·16	0·13	0·14	0·522
5	1·13	1·51	0·41	0·36	0·38	17·98	4·00	1·43	0·78	1·09	0·16	0·13	0·15	0·588
2	1·16	1·61	0·45	0·41	0·43	16·64	2·81	1·45	0·84	1·13	0·19	0·19	0·19	0·602
8	1·22	1·48	0·37	0·41	0·39	14·72	2·13	1·23	0·76	0·99	0·14	0·12	0·13	0·542
8	1·25	1·50	0·41	0·49	0·45	15·50	2·64	1·14	0·71	0·91	0·16	0·15	0·16	0·557
2	1·14	1·37	0·33	0·36	0·34	14·20	2·04	0·95	0·66	0·80	0·13	0·10	0·11	0·524
3	1·23	1·46	0·34	0·31	0·32	14·41	2·33	1·00	0·62	0·80	0·16	0·10	0·13	0·515
	0·89	1·20	0·28	0·22	0·25	13·52	2·09	0·92	0·48	0·69	0·08	0·12	0·10	0·468
	0·91	1·15	0·21	0·18	0·19	13·79	2·11	0·88	0·46	0·66	0·11	0·08	0·09	0·473
	1·01	1·24	0·19	0·21	0·20	12·27	1·80	0·89	0·50	0·69	0·06	0·08	0·07	0·440
	1·02	1·28	0·20	0·24	0·22	12·91	2·10	0·76	0·45	0·60	0·06	0·04	0·05	0·403
	0·84	1·05	0·21	0·17	0·19	12·77	1·86	0·77	0·42	0·58	0·07	0·06	0·07	0·321
	0·82	1·02	0·13	0·17	0·15	13·82	2·50	0·61	0·32	0·45	0·05	0·06	0·06	0·275
	0·75	1·02	0·13	0·14	0·14	12·16	1·70	0·59	0·20	0·38	0·04	0·03	0·03	0·212
	0·83	1·06	0·12	0·14	0·13	12·31	1·86	0·39	0·19	0·28	0·04	0.02	0·03	0·179
	0·75	0·96	0·15	0·16	0·15	12·20	1·73	0·40	0·15	0·27	0·03	0·03	0·03	0·232

Tuberculosis (pulmonary and non-pulmonary)

Incidence and deaths in age groups for the years 1931 to 1954

Year	0 —				1 —				5 —				15 —				45 —				65 —				Total				Total	
	Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		Pul.		Non-pul.		All forms	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
1931	1	4	10	10	10	4	83	42	135	17	174	19	762	525	179	45	296	276	28	13	25	35	7	4	1,229	861	481	133	1,710	994
2	1	2	6	7	24	11	69	35	60	14	130	28	710	455	154	33	243	254	26	11	23	30	3	5	1,061	766	388	199	1,449	885
3	3	2	6	8	11	10	46	19	44	13	110	15	701	498	120	45	268	245	21	10	26	23	1	3	1,053	791	304	100	1,357	891
4	—	4	7	9	8	8	52	23	54	12	105	27	666	449	120	50	258	252	17	9	40	36	2	2	1,026	761	303	120	1,329	881
5	3	4	3	3	8	2	45	17	62	11	98	15	611	430	120	42	253	230	22	16	20	37	6	1	957	714	294	94	1,251	808
6	1	1	4	6	5	3	50	21	49	17	98	25	615	396	109	36	235	223	25	15	32	31	3	2	937	671	289	105	1,226	776
7	1	2	9	6	11	7	53	22	48	5	100	19	635	396	165	44	261	213	22	17	45	51	9	7	1,001	674	358	115	1,359	789
8	6	1	9	10	7	3	38	15	54	8	87	24	577	350	124	29	231	235	18	15	32	30	6	6	907	627	282	99	1,183	726
9	3	1	3	3	8	3	43	23	34	6	66	14	559	355	126	41	205	202	22	14	40	34	5	5	849	601	265	100	1,114	701
1940	3	3	2	3	4	1	28	21	31	6	68	13	620	408	112	39	242	208	23	11	43	52	6	4	943	678	239	91	1,182	769
1	3	—	3	2	14	5	46	35	36	6	68	18	610	366	124	42	266	241	13	11	39	61	4	7	968	679	258	115	1,226	794
2	—	1	2	5	5	1	31	15	35	5	57	12	615	338	119	34	209	206	24	9	30	41	1	5	894	592	234	80	1,128	672
3	1	1	4	3	11	2	29	20	29	4	68	14	614	291	138	41	211	212	26	13	34	36	7	2	900	546	272	93	1,172	639
4	2	—	3	5	18	3	32	13	41	4	39	12	522	275	114	21	213	174	20	14	44	35	3	3	840	491	211	68	1,051	559
5	3	3	6	4	19	2	28	22	35	7	57	14	606	257	91	28	213	177	15	8	37	50	3	5	913	496	200	81	1,113	577
6	5	3	5	9	12	—	29	14	44	3	44	10	517	232	71	22	195	171	13	11	32	51	6	1	805	460	168	67	973	527
7	3	4	2	6	24	5	17	14	60	1	38	9	482	236	59	25	190	176	13	6	27	28	5	4	786	450	134	64	920	514
8	4	2	3	5	33	5	16	8	42	3	36	8	545	261	66	14	198	176	18	6	41	30	2	8	863	477	141	49	1,004	526
9	7	1	—	3	29	4	17	7	62	—	36	4	566	220	81	14	194	150	12	6	41	43	8	4	899	418	154	38	1,053	456
1950	6	—	1	2	32	3	22	7	48	2	34	2	449	210	61	23	166	159	10	8	36	37	4	5	737	411	132	47	869	458
1951	11	2	2	2	38	—	13	7	48	—	20	6	449	134	56	15	146	134	11	7	19	48	3	2	711	318	105	39	816	357
1952	4	—	1	1	40	4	14	5	76	—	27	4	416	91	46	5	151	130	6	6	30	44	2	3	717	269	96	24	813	293
1953	7	—	2	—	33	1	7	2	63	—	28	—	460	67	38	8	143	96	14	7	36	34	4	1	742	198	93	18	835	216
1954	6	—	2	2	22	—	7	1	54	—	17	2	406	67	58	8	149	79	13	3	35	42	10	5	672	188	107	21	779	209

Tuberculosis (non-respiratory)—new cases notified during 1954—age groups and site

Age Groups	LOCATION OF DISEASE.																	
	Meninges		Miliary		Abdomen		Bones joints		Vertebral column		Lymphatic system		Genito-urinary		Other sites		Totals	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
0— 4	—	4	—	—	—	—	1	1	—	—	3	—	—	—	—	—	4	5
5— 9	4	—	—	—	—	—	—	1	—	—	4	1	—	—	1	1	9	3
10—14	1	—	—	—	—	—	—	—	—	1	2	1	—	—	—	—	3	2
15—19	2	1	—	—	—	1	1	—	—	—	1	4	—	—	—	2	4	8
20—24	—	2	—	—	1	1	1	1	1	—	2	4	1	1	1	1	7	10
25—34	—	—	—	—	2	1	2	1	3	1	1	3	4	1	—	—	12	7
35—44	—	—	—	—	—	1	—	1	—	—	—	5	1	2	—	—	1	9
45—54	—	—	—	—	—	—	1	—	—	—	—	2	—	2	1	1	2	5
55—64	—	—	—	—	—	—	—	—	—	—	—	1	2	1	1	1	3	3
65—	—	—	—	—	—	—	1	1	1	1	—	2	1	—	—	3	3	7
Totals ..	7	7	—	—	3	4	7	6	5	3	13	23	9	7	4	9	48	59

Sources of notification of tuberculosis during 1954

Source	Respiratory	Non-respiratory	Tota
Private practitioners	372	6	378
Chest Clinic staff	124	2	126
General hospitals	158	93	251
Mental hospitals	2	—	2
Sanatoria	4	5	9
H.M. Forces	12	1	13
Other sources	—	—	—
Totals	672	107	779

Tuberculosis

Primary notifications and deaths—1954

Classification in municipal wards

Ward	Estimated population	Persons per acre	NOTIFICATIONS						DEATH (all form
			Respiratory		Non-respiratory		Total all forms	Rate per 1,000 pop.	No. (Manchester figures)
			M.	F.	M.	F.			
Alexandra Park..	21,552	27·63	8	4	1	1	14	0·65	7
All Saints'	18,444	58·55	15	18	6	2	41	2·22	11
Ardwick	17,618	40·41	17	11	2	1	31	1·76	5
Barlow Moor	15,340	13·70	9	6	2	—	17	1·11	4
Beswick	19,391	79·80	8	3	1	2	14	0·72	9
Blackley	21,281	17·36	7	6	—	3	16	0·75	8
Bradford	22,762	29·48	8	7	1	—	16	0·70	5
Burnage	21,946	29·78	11	11	2	—	24	1·09	4
Cheetham	14,079	31·57	6	2	—	2	10	0·71	7
Chorlton-cum-Hardy..	19,870	23·40	6	4	—	2	12	0·60	3
Collegiate Church	13,520	26·99	18	8	2	—	28	2·07	2
Crumpsall	22,240	12·32	8	11	—	2	21	0·94	2
Didsbury	17,430	14·76	4	3	—	1	8	0·46	1
Gorton North	22,856	42·33	15	8	3	3	29	1·27	9
Gorton South	17,402	27·58	14	7	—	4	25	1·44	8
Harpurhey	18,452	49·60	11	7	—	2	20	1·08	3
Levenshulme	19,415	32·04	9	9	2	—	20	1·03	5
Lightbowne	20,163	51·70	11	6	1	—	18	0·89	3
Longsight	15,477	43·60	8	7	—	1	16	1·03	—
Miles Platting	14,613	32·91	8	9	1	1	19	1·30	5
Moss Side East	18,924	68·32	20	10	1	3	34	1·80	7
Moss Side West	17,966	67·04	6	5	—	4	15	0·83	6
Moston	20,363	17·40	4	5	—	3	12	0·59	4
New Cross	14,238	40·22	10	2	—	1	13	0·91	10
Newton Heath	18,785	20·76	8	6	1	1	16	0·85	4
Newtown	18,811	37·77	20	11	4	3	38	2·02	10
Northenden	24,669	11·06	10	10	4	2	26	1·05	8
Old Moat	16,894	27·08	8	9	2	1	20	1·18	7
Openshaw	22,644	41·70	18	4	2	1	25	1·10	3
Rusholme	16,807	23·27	3	1	—	1	5	0·30	5
St. George's	18,984	59·70	13	16	2	2	33	1·74	7
St. Luke's	18,019	62·78	19	12	1	1	33	1·83	7
St. Mark's	21,284	41·17	14	5	1	—	20	0·94	9
St. Peter's	11,507	13·75	10	3	—	1	14	1·22	3
Withington	15,230	27·20	5	2	1	1	9	0·59	1
Wythenshawe	49,931	14·72	23	29	5	7	64	1·28	16
Unclassified	—	—	3	—	—	—	3	—	—
CITY OF MANCHESTER ..	699,000	25·65	395	277	48	59	779	1·11	208

Occupation and social classification*

Males: Social class 1	2	3	4	5	Males: Total	OCCUPATIONAL GROUP	Single women: Social class 1	2	3	4	5	Single women: Total	Married women: Social class 1	2	3	4	5	Married women: Total	Total women	Total both sexes
—	—	—	—	—	—	Fishermen	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Agricultural, horticultural and forestry occupations	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	3	—	—	3	Mining and quarrying occupations	—	—	—	—	—	—	—	—	—	—	—	—	—	3
—	—	—	1	—	1	Workers—non-metalliferous mining products (not coal)	—	—	—	—	—	—	—	—	—	—	—	—	—	1
—	—	—	—	—	—	Coal gas, coke makers, workers in chemical and allied trades	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	48	3	—	51	Workers in metal manufacture, engineering and allied trades	—	—	2	—	—	2	—	—	2	—	—	2	4	55
—	—	4	1	—	5	Textile workers	—	—	1	1	—	2	—	—	3	1	—	4	6	11
—	—	2	—	—	2	Tanners, etc., leather goods makers, fur dressers	—	—	—	—	—	—	—	—	1	—	—	1	1	3
—	—	6	3	—	9	Makers of textile goods and articles of dress (not boots, shoes)	—	—	1	10	—	11	—	—	4	9	—	13	24	33
—	—	3	—	—	3	Makers of foods, drinks and tobacco	—	—	—	—	—	—	—	—	—	—	—	—	—	3
—	—	7	2	—	9	Workers in wood, cane and cork	—	—	—	—	—	—	—	—	—	—	—	—	—	9
—	—	7	—	—	7	Makers of and workers—paper, paperboard: bookbinders, printers	—	—	3	—	—	3	—	—	—	—	—	—	3	10
—	—	6	—	—	6	Makers of products (not elsewhere specified)	—	—	1	—	—	1	—	—	1	—	—	1	2	8
—	—	5	—	9	14	Workers in building and contracting	—	—	—	—	—	—	—	—	—	—	—	—	—	14
—	—	6	1	—	7	Painters and decorators	—	—	1	—	—	1	—	—	—	—	—	—	1	8
—	1	—	—	—	1	Administrators, directors, managers (not elsewhere specified)	—	—	—	—	—	—	—	—	—	—	—	—	—	1
—	—	21	5	4	30	Persons employed in transport and communications	—	—	1	—	—	1	—	—	1	—	—	1	2	32
—	5	14	1	2	22	Commercial finance and insurance occupations (not clerks)	—	—	4	—	—	4	—	1	7	—	—	8	12	34
5	2	1	—	—	8	Professional and technical occupations (not clerks)	—	4	2	—	—	6	—	4	—	—	—	4	10	18
1	—	14	—	3	18	Persons employed in defence services	—	—	—	—	—	—	—	—	—	—	—	—	—	18
—	1	4	—	—	5	Persons professionally engaged in entertainments and sport	—	—	—	—	—	—	—	—	—	—	—	—	—	5
—	—	6	3	1	10	Persons engaged in personal service (including institutions, clubs, etc.)	—	—	1	6	—	7	—	—	2	3	7	12	19	29
—	3	29	—	—	32	Clerks, typists, etc.	—	1	39	—	—	40	—	1	8	—	—	9	49	81
—	—	6	6	1	13	Warehousemen, storekeepers, packers, bottlers	—	—	—	2	2	4	—	—	—	2	1	3	7	20
—	—	4	—	—	4	Stationary engine, crane and tractor drivers, stokers, etc.	—	—	—	—	—	—	—	—	—	—	—	—	—	4
—	—	—	1	47	48	Workers in unskilled occupations (not elsewhere specified)	—	—	—	—	2	2	—	—	—	—	5	5	7	55
—	—	—	9	—	9	Other and undefined workers	—	—	—	4	—	4	—	—	—	1	—	1	5	14
6	12	196	36	67	317	Totals	—	5	56	23	4	88	—	6	29	16	13	64	152	469
—	—	—	—	—	25	Retired	—	—	—	—	—	—	—	—	—	—	—	—	—	25
—	—	—	—	—	9	No occupations (inmates of institutions, etc.)	—	—	—	—	—	4	—	—	—	—	—	—	4	13
—	—	—	—	—	16	Infants (0—4 years)	—	—	—	—	—	12	—	—	—	—	—	—	12	28
—	—	—	—	—	28	School children	—	—	—	—	—	31	—	—	—	—	—	—	31	59
—	—	—	—	—	—	Students	—	—	—	—	—	1	—	—	—	—	—	—	1	1
—	—	—	—	—	—	Household duties	—	—	—	—	—	—	—	—	—	—	—	77	77	77
—	—	—	—	—	395	Totals	—	—	—	—	—	136	—	—	—	—	—	141	277	672

* Based on the 1950 classification of occupations and social groups used by the Registrar General

Return showing the work of the Manchester Chest Clinic

	Respiratory			Non-respiratory			All forms			Total
	M.	F.	C.	M.	F.	C.	M.	F.	C.	
Number of patients diagnosed as tuberculous..	322	229	72	5	4	7	327	233	79	639
Number of contacts diagnosed as tuberculous..	—	—	—	—	—	—	5	12	15	32
Number of patients taken off the register as "recovered"	117	87	41	7	10	12	124	97	53	274
Number of cases on the register at 1st January, 1954	2259	1803	436	68	76	45	2327	1879	481	4687
Number of cases on the register at 31st December, 1954	2243	1780	389	57	54	24	2300	1834	413	4547
Number of patients on the register awaiting admission to sanatoria at 31st December, 1954	44	23	2	1	—	—	45	23	2	70

Total attendances	35,116
Total new patients seen	8,070
Total X-rays taken	36,001
Total clinical sessions	1,369

Cases on the notification register at January, 1955

City Ward	Respiratory		Total	Non-respiratory		Total	Grand total
	Active	In-active		Active	In-active		
ndra Park	71	48	119	2	9	11	130
aints'	110	33	143	11	6	17	160
ick	83	20	103	5	11	16	119
ey	152	101	253	4	14	18	271
w Moor	50	35	85	2	3	5	90
ill	185	91	276	15	20	35	311
ck	62	24	86	3	11	14	100
ey	120	41	161	3	7	10	171
ord	87	45	132	4	5	9	141
ge	81	50	131	5	9	14	145
ham	52	23	75	3	6	9	84
ton-cum-Hardy	50	28	78	2	5	7	85
iate Church	73	28	101	1	4	5	106
psall	102	38	140	4	3	7	147
ury	34	29	63	2	3	5	68
n North	76	35	111	4	12	16	127
n South	67	33	100	5	5	10	110
rhey	71	17	88	4	5	9	97
Oldham	85	25	110	9	7	16	126
hulme	61	24	85	2	6	8	93
owne	61	22	83	4	6	10	93
ght	72	25	97	—	10	10	107
Platting	54	13	67	5	10	15	82
Side East	85	39	124	7	10	17	141
Side West	74	32	106	6	12	18	124
n	67	33	100	7	6	13	113
Cross	65	18	83	4	4	8	91
n Heath	69	21	90	5	9	14	104
nden	184	83	267	7	16	23	290
oat	77	34	111	5	6	11	122
aw	79	34	113	4	9	13	126
me	45	26	71	3	6	9	80
orge's	84	31	115	5	13	18	133
ke's	84	36	120	6	11	17	137
rk's	90	46	136	3	11	14	150
er's	42	11	53	2	4	6	59
gton	37	21	58	2	2	4	62
ouse Park	219	123	342	8	20	28	370
sified	5	—	5	—	—	—	5
s—January, 1955	3,165	1,416	4,581	173	316	489	5,070
January, 1954	3,342	1,184	4,526	277	294	571	5,097
January, 1953	3,253	1,134	4,387	431	213	644	5,031
January, 1952	2,983	1,338	4,321	505	412	917	5,238
March, 1951	2,848	1,684	4,532	570	576	1,146	5,678

OTE: During 1954 Newtown Ward was renamed Hugh Oldham Ward, and Northenden ythenshawe Wards were divided into Baguley, Benchill, Northenden and Woodhouse ards. These revisions were incorporated into the register and are shown in the above

Summary of notifications of tuberculosis during the period 1st January to 31st December, 1954, in the City

Age periods	FORMAL NOTIFICATIONS												
	Number of primary notifications of new cases of tuberculosis												
	0–	1–	2–	5–	10–	15–	20–	25–	35–	45–	55–	65–	75–
Respiratory, males	6	4	6	13	12	36	46	64	56	67	56	28	1
Respiratory, females	—	2	10	15	14	50	59	61	34	14	12	5	1
Non-respiratory, males	—	2	2	9	3	4	7	12	1	2	3	3	—
Non-respiratory, females	2	2	1	3	2	8	10	7	9	5	3	6	1

New cases of tuberculosis coming to the knowledge of the Medical Officer of Health during the above-mentioned period, otherwise than by formal notification

Source of information			NUMBER OF CASES IN AGE GROUPS											
			0–	1–	2–	5–	10–	15–	20–	25–	35–	45–	55–	65–
Death returns from local registrars	Respiratory	M.	—	—	—	—	—	—	—	—	—	3	3	9
		F.	—	—	—	—	—	—	2	1	—	2	1	1
	Non-respiratory	M.	—	—	—	—	—	1	—	1	—	—	—	1
		F.	—	—	—	1	—	1	—	—	—	—	1	—
Death returns from Registrar General (transferable deaths)	Respiratory	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
	Non-respiratory	M.	—	—	—	—	—	—	—	—	—	1	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
Posthumous notifications	Respiratory	M.	—	—	—	—	—	1	—	—	—	2	—	1
		F.	—	—	—	—	—	—	—	—	—	—	—	1
	Non-respiratory	M.	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—	—	—
" Transfers " from other areas (excluding transferable deaths)	Respiratory	M.	—	—	2	1	—	3	11	24	8	4	2	—
		F.	—	—	1	1	—	—	12	23	2	1	—	—
	Non-respiratory	M.	—	—	1	—	—	—	—	2	—	—	—	—
		F.	—	—	—	—	—	—	—	1	—	—	—	—
Other sources	Respiratory	M.	—	—	—	—	—	—	—	2	—	—	—	—
		F.	—	—	—	—	—	—	2	1	—	—	—	—
	Non-respiratory	M.	—	—	—	—	2	—	—	1	1	—	—	—
		F.	—	—	—	1	—	1	1	—	—	1	—	—

Totals of cases (A) Respiratory, male

(B) Respiratory, female

(C) Non respiratory, male

(D) Non-respiratory, femal

Primary notifications—respiratory tuberculosis
Age, incidence and classification of cases seen by Chest Physicians
(Ministry of Health Circular 83/47 (1).)

Respiratory A				Respiratory B				Total cases classified	Cases not classified for various reasons (2)	Total primary notifications
1	2	3	Total	1	2	3	Total			
3	2	—	5	--	—	—	—	5	1	6
3	—	1	4	—	—	—	—	4	—	4
5	1	—	6	—	—	—	—	6	—	6
8	—	—	8	—	—	—	—	8	5	13
5	3	—	8	—	1	1	2	10	2	12
7	9	—	16	—	17	—	17	33	3	36
2	9	1	12	1	28	2	31	43	3	46
2	13	—	15	5	32	5	42	57	7	64
1	9	3	13	1	24	10	35	48	8	56
—	5	—	5	1	41	12	54	59	8	67
1	3	—	4	1	31	13	45	49	7	56
—	1	2	3	—	6	11	17	20	9	29
37	55	7	99	9	180	54	243	342	53	395
10·8	16·1	2·0	28·9	2·6	52·6	15·8	71·1	100		
15·2	19·5	2·9	37·6	2·1	46·4	13·9	62·4	100		

es

Respiratory A				Respiratory B				Total cases classified	Cases not classified for various reasons (2)	Total primary notifications
1	2	3	Total	1	2	3	Total			
—	—	—	—	—	—	—	—	—	—	—
—	1	—	1	—	—	—	—	1	1	2
4	2	1	7	—	—	—	—	7	3	10
12	1	—	13	—	—	—	—	13	2	15
6	4	1	11	1	1	—	2	13	1	14
2	21	1	24	1	20	2	23	47	3	50
4	18	1	23	—	26	6	32	55	4	59
2	9	—	11	2	36	6	44	55	6	61
—	4	2	6	—	24	1	25	31	3	34
1	—	—	1	—	9	3	12	13	1	14
—	1	1	2	—	7	2	9	11	1	12
—	—	—	—	—	1	3	4	4	2	6
31	61	7	99	4	124	23	151	250	27	277
12·4	24·4	2·8	39·6	1·6	49·6	9·2	60·4	100		
15·7	27·0	3·4	46·1	1·9	42·7	9·4	54·0	100		

CLASSIFICATION TABLE—NOTES.

A.— Cases in which tubercle bacilli have never been discovered in any exudate, excrement, discharge or tissue.

B.— Cases in which tubercle bacilli have been found at any time in any exudate, excrement, discharge or tissue.

1.— Cases with slight constitutional disturbance.

3.— Cases with profound systematic disturbance or constitutional deterioration and with marked impairment of function, either local or general.

2.— All cases which cannot be placed in groups 1 and 3.

s column are included cases (*a*) where death occurred immediately after notification and before the Chest
ian had opportunity to see the patient; (*b*) service cases; (*c*) cases in mental hospitals, etc.

EPILEPSY AND CEREBRAL PALSY

All cases brought to the notice of the Department are referred to the Sc Health Service in accordance with Section 34 of the Education Act, 1 During the year, 11 cases of epilepsy and 13 cases of cerebral palsy were refer All were under the age of five years.

The following statement relates to epileptic and spastic children know the School Health Services :—

Epilepsy	
Children in Soss Moss Residential School	34
Children attending ordinary schools but under supervision..	105
Cerebral Palsy	
Children in Margaret Barclay Residential School	17
Children in Lancasterian Day Special School	64
Children under orthopaedic treatment at clinics	30

The figures relate to children found to be suffering from the two de and do not necessarily indicate the incidence of either disease in the Cit neither condition is notifiable. There may be, for example, children suff from so severe or so slight epilepsy or birth injury that they may never have brought to the notice of the Department, particularly children over 10 of age.

Residential provision for sane epileptics aged 15 years or over, of sexes, is made under the terms of Part III, National Assistance Act, 1948, a Corporation's Langho Colony for sane epileptics. Details of the accomm tion and facilities provided at this establishment are given elsewhere in report.

HOME NURSING SERVICE

For the sixth consecutive year since the introduction of the National H Service in 1948 the number of patients nursed at home and the numbe nursing visits paid have increased.

Only 66 more patients were referred for home nursing in 1954 by compar with the previous year—an increase of 0·5 per cent. but the analysis of new given later suggests that the weather was an important factor for in bronchitis, pneumonia and influenza accounted for 2,240 cases, compared only 1,858 in 1954. There are also other factors which suggest that the nu of cases referred to the district nurse will continue to grow for several years the continued growth in the proportion of aged persons in the populati the need to develop the domiciliary health services even further if the conti pressure on the hospitals is to be relieved ; the possibility of some of the ge practitioners making more use of the home nursing service in order to themselves for other work. All the evidence suggests that the home nu service will continue to develop, though probably at a slower rate than has experienced over the past few years.

	1954	1953	*Per cent. increase on 1953*	*Per incr on*
Patients on books 1st January ..	1,920	1,707	12·5	216
Add—new patients	13,729	13,663	0·5	156
Total patients nursed ..	15,649	15,370	1·8	162
Deduct—patients taken off books	13,283	13,450	—	–
Patients on books 31st December	2,366	1,920	23·2	214

Classification of patients and nursing visits

A *Patients nursed—*

	1954	*per cent.*
Medical	12,890	82·4
Surgical	1,677	10·8
Infectious diseases	70	0·4
Tuberculosis	773	4·9
Maternal complications	239	1·5
Other	—	—
Totals	15,649	100·0

Nursing visits—

	1954	*Per cent.*	1953	*Per cent.*
Medical	246,300	76·8	217,577	74·0
Surgical	41,268	12·9	45,940	15·6
Infectious diseases	1,362	0·4	4,758	1·6
Tuberculosis	30,030	9·3	23,708	8·1
Maternal complications	1,837	0·6	2,034	0·7
Other	—	—	—	—
Totals	320,797	100·0	294,017	100·0

Classification of new patients referred to the Home Nursing Service during the year

Diagnosis—

	1954	Per cent.	1953	Per cent.	1952 Per cent.	1951 Per cent.
ctious and notifiable diseases :						
Influenza	53	0·4	103	0·8	0·8	1·1
Primary pneumonia	449	3·3	556	4·1	3·5	3·2
Broncho pneumonia	215	1·6	235	1·7	1·5	2·0
Measles	21	0·1	16	0·1	0·2	0·3
Whooping cough	12	0·1	13	0·1	0·1	0·1
Pulmonary tuberculosis	611	4·5	537	4·0	2·6	2·1
Non-pulmonary tuberculosis	69	0·5	40	0·3	0·4	0·4
Erysipelas	20	0·1	20	0·2	0·2	0·1
Other notifiable diseases	14	0·1	31	0·2	0·3	0·1
Total of (1)	1,464	10·7	1,551	11·5	9·5	9·5
betes	217	1·6	195	1·4	2·0	2·0
aemias	249	1·9	273	2·0	1·5	1·5
nchitis	1,141	8·3	1,346	9·8	8·0	6·0
er respiratory diseases	447	3·2	564	4·1	3·5	2·5
rt diseases	1,441	10·5	1,146	8·4	9·0	9·5
cer	534	3·9	638	4·7	5·0	6·5
eases of the circulatory system	322	2·3	352	2·6	3·5	4·0
eases of the nervous system	90	0·7	127	0·9	1·0	1·5
-genital	105	0·7	111	0·8	1·5	2·0
nplication of pregnancy	49	0·4	53	0·4	0·5	1·0
nplication following childbirth	181	1·3	215	1·6	1·5	1·5
er medical cases	6,023	43·9	5,063	37·0	34·0	35·5
t-operative	550	4·0	576	4·2	5·0	4·5
icose ulcers	170	1·2	155	1·1	1·0	1·5
er surgical	734	5·3	1,285	9·4	12·5	11·0
erations	12	0·1	13	0·1	—	—
Totals	13,729	100·0	13,663	100·0	100·0	100·0

B *Age groups—*

The 13,729 new patients were in the following age groups :—

Age group	1954	Per cent.	1953	Per cent.	1952 Per cent.
0—4	835	6·1	1,316	9·7	8·0
5—14	876	6·4	1,051	7·7	7·3
15—64	7,017	51·1	6,768	49·5	47·9
65—74	2,747	20·0	2,492	18·2	20·8
75 and over	2,254	16·4	2,036	14·9	16·0
Totals	13,729	100·0	13,663	100·0	100·0

The above analyses of *new* patients do not, however, give a true pic
the work of the district nurse. For example the proportion of childre
per cent.) amongst new patients in 1954 is substantially higher th
proportion of children found in the average case-load of the district
(6 per cent.). Again, the proportion of aged persons over 65 among
patients (36·4 per cent.) is substantially less than the proportion of aged p
included in the average case-load. The reason for the differences in the
for young and old is, of course, that the young person is generally nurse
for a comparatively short time, whereas the aged person stays on the
much longer, and many in the highest age group frequently remain
books until they die.

To complete the picture of the home nursing service a nurse's averag
load will total about 32 patients, of whom one or two will be children,
the remaining patients one-half will be in the age group 15–64, and the
half over the age of 65. A few of her patients will require attention twice
about 30 per cent. will require daily attention, 27 per cent. will require
2–3 times a week, 40 per cent. will require weekly attention, and the rem
at less frequent intervals. About three-fifths of her patients will
subcutaneous or intra-muscular injections (including 2–3 tuberculosis pati
one quarter, most of whom will be over the age of 65, will require general
attention ; and the remainder will require dressings and other nursing trea
The nurse will thus visit on the average about fifteen patients a day, of
about one-half will be aged patients but these aged patients will account for
two-thirds of the nurse's time.

Whilst it is perhaps surprising to find that more new patients are r
for home nursing in the 15–64 age group (51 per cent.) than all other grou
together it is apparent that in terms of nursing visits and of time spe
age-group takes up less than half of the nurse's time, the reason for this
that the majority of patients in the middle age group are receiving injecti
one type or another, and although many of them remain on the books fo
periods the time taken is, per patient, substantially less than that taken in
nursing care of many of the aged patients.

Of the 15,649 patients nursed 2,969 patients received more than 24
during the year i.e., more than the average. One-third of patients on the
at 31st December, 1954 had been receiving home nursing care for more th
year, over 50 of them since 1948.

ing staff

he average number of district nurses at work during 1954 was 86 of whom
ere whole-time and 15 part-time, giving an equivalent whole-time strength
3½.

his figure of 78½ is analysed into :—

a) *Nursing grades*—

	1954	1953	At 31–12–54
Queen's Senior Superintendent of home nursing ..	1	1	1
Queen's superintendents	4	4	4
Queen's assistant superintendents	3	2¾	3
Queen's female nurses	30¼	32½	33½
Queen's male nurses	9¼	10	11
Student district nurses	6½	6	9
State-registered nurses	19½	14	14½
State-enrolled assistant nurses	5	6	5
	78½	76¼	81

b) *Accommodation*—

	1954	1953
Resident in district nurses' home or centre under control of a superintendent	23¾	30
Non-resident, but working from nurses' home or centre under control of a superintendent	49¼	38¼
Operating on "single" or "double" districts under ultimate control of a superintendent	5½	8
	78½	76¼

ing

he Institution has three Training Homes for the training of State-registered
s in home nursing—at Ardwick, Harpurhey and Hulme. The normal
e of training is six months but an abridged course of four months is
tted if the student holds certain midwifery or public health certificates
s a certain amount of district nursing experience.

uring 1954, 15 students were trained and sat for the Queen's Roll examina-
ncluding two students trained on behalf of the Lancashire County Council
npared with 17 in 1953 and 15 in 1948. The four weeks lecture block in
raining course is thrown open to other training authorities in East
shire, and during 1954, 19 students attended from Bury, Rochdale, Salford
tockport. A disturbing feature of the training is the extent to which the
appears to be gaining at the expense of the North. Since 1948 the
er of Queen's Roll passes in England and Wales has increased by about
th, but the national distribution is very uneven. Of the annual total of
d district nurses the South's percentage has risen from 64 per cent. to
cent. whilst the North's percentage has fallen from 36 per cent. to 28 per
This comparative attraction of the South for district nursing trainees is
ated by the excess of demand for students over their supply, so that
Training Homes in the South generally have a full complement of students
in the North frequently have unfilled places.

ort

31st December, 1954, 19 motor cars, 2 motor cycles, and 6 powered
were in regular use "on the district," as compared with 17 motor cars,
r cycle, and 1 powered cycle in 1953. Of the cars, 8 are the property of
titution, and 4 the property of the Corporation. The remaining 7 cars
ned by the nurses and travelling allowances granted for their use. Most
emaining nurses use bicycles but a few either walk or use public transport.

If, as predicted, the home nursing service continues to develop there is
to be an increase in the demand for district nurses, but, unfortunately, fo
next ten years the supply of nurses is unlikely to increase. More and
consideration will therefore have to be given to providing the district
with adequate transport. Provided the district nurse can undertake one-
additional visits with the aid of a car (and this is generally possible exce
some congested urban areas) the car is not an expensive luxury but, on a
basis, a real substitute for unrecruitable nurses. The car also enables the
to arrive at her patient's house dry and warm in all weathers, and these ca
important factors in maintaining a high standard of work.

Sickroom equipment loans service

This service operated by the Institution in conjunction with the British
Cross Society makes available the following articles for loan to patients f
air-rings ; bed-bottles ; bed-cradles ; bed-pans ; bed-rests ; bed-tab
feeding cups ; hot-water bottles ; inhalers ; kidney bowls ; rubber sh
sputum mugs ; steam-kettles ; commodes ; walking-sticks ; bed-line
emergency cases) ; and for a small weekly charge—air-beds and crutches

The district nursing centres loan out equipment only to persons being n
by them. The Red Cross issue equipment to these patients and also to
persons in need provided that the application is supported by a doctor, mid
health visitor, or district nurse. Red Cross centres are open at certain tim
the day in Chorlton-on-Medlock, Crumpsall, Didsbury, Newton H
Openshaw, Whalley Range, and Wythenshawe, and in Every Street, An
(the University Settlement).

DARBISHIRE HOUSE HEALTH CENTRE

The Darbishire House Health Centre which was opened in April, 1954,
to provide in the first stage a first class family practitioner service. To thi
4 family practitioners began work as a group, practising from the Centre,
facilities for X-ray examinations and routine pathological, bacteriologica
chemical tests. The nursing staff at the Centre consists of 3 district n
paying home nursing visits and staffing a treatment room at the Centre.

The cost of providing one of the nurses is met by the Home Nursing Se
and the cost of the remaining 2 nurses by the Management Committee o
Centre. At the close of the year, after 9 months working, the nursing ser
were fully established and were working smoothly.

Two of the nurses are Queen's district nurses and the third nurse is a
registered nurse with specialized industrial nursing experience. All the n
are interchangeable, and on the average each nurse spends one-third of her
on home nursing and two-thirds on nursing duties at the Centre.

The population covered by the Centre is for the present about 14,00
as this represents the practices of the 4 doctors at the Centre, the popula
though for the most part clustered round the Centre, extends beyond
immediate area. As a consequence, the home nursing is more widespread
is the case for other parts of the City where each nurse covers a concent
district. Those Centre patients who live at extreme distances from the C
therefore are nursed by non-Centre nurses on the staff of the Home Nu
Service.

CONVALESCENCE

e number of patients admitted to convalescent homes has increased by ompared with the previous year. The numbers are 250 in the year 1953 9 in 1954.

e following particulars indicate the number of patients admitted to each escent home :—

West Hill Convalescent Home, Southport	185
lackburn and District Convalescent Home, St. Annes	21
ear Home of Recovery, West Kirby	16
idney House, Pensarn (mothers with children)	7
efton House, Birkenhead (children)	4
ewish Blind Society's Homes	6
ritish Red Cross Society, Binswood Rest Home, Manchester	16
illary Nursing Home, Prestatyn (children)	1
Boarbank Hall," Grange-over-Sands	1
otton Districts Convalescent Home, Hest Bank, Near Morecambe	1
roomsgrove Convalescent Home, Waterloo, Liverpool	1
Total	259

ommendations for convalescence are received, mainly, from the patients' l attendants but during the year a number of applications have been d from hospital almoners in respect of patients discharged from hospital nding out-patient departments.

HOME HELP SERVICE

total establishment of home helps was 60 full-time female employees g a 44 hour week and holding superannuable appointments. This figure ame as in the previous year. The number of full-time permanent helps ed at 1st January, 1954 was 60 and during the year 13 were recruited and gned from the Service. The average number of permanent helps ed was 58.

number of part-time helps recruited was 8 and the number resigning the year was 3.

ddition to the 58 permanent helps employed at 31st December 1954, as 1 temporary full-time help, and there were 11 part-time home helps g in the Service as reliefs for those permanent helps not on duty as a of illness or holidays.

average number of full-time helps absent from duty as the result of was 8 each week and of part-time home helps 1 each week. This fairly te of sickness may be explained by the fact that in many cases the helps aged in heavy, dirty and difficult work which may lower their resistance ness.

average length of time spent on each case by each home help is 2 weeks, quently assistance has to be given over longer periods where the need

The demands upon the service have multiplied as it has become increasi
well known, but as no increase in the number of helps employed has taken p
the demand has had to be met by providing a greater amount of part-time h
This means that the majority of the full-time helps are engaged upon tw
three cases of sickness, old age and infirmity each week. Confinement c
are always provided with full-time assistance as part-time help is inadequat
these occasions.

During the year applications for assistance were received from 1,549 ho
holds ; 375 of these were in cases following confinement and the remai
1,174 were cases of sickness, old age and infirmity. Outstanding applicat
from 1953 numbered 42 confinement cases and 4 sickness cases, totalling

The sources of application for assistance in 1954 were as follows :—

Source	Number in cases following confinement		Number in cases of sickness, old age, etc.		Totals	
	1954	1953	1954	1953	1954	
Personal application (by letter, telephone, or visit to the office by applicant or a representative) ..	234	255	579	576	813	
Child welfare centres, health visitors, or midwives	136	129	146	132	282	
Hospital almoners	4	12	184	170	188	
Medical practitioners..	1	2	145	116	146	
Tuberculosis Service	—	—	8	18	8	
District Nursing Institution	—	—	27	19	27	
Welfare Services Department	—	—	33	16	33	
National Assistance Board	—	—	37	16	37	
Blind Aid Society	—	—	9	6	9	
Mental Health Service	—	—	3	4	3	
Council of Social Service	—	—	3	11	3	
Totals	375	398	1,174	1,084	1,549	1

Of the 1,549 applications for help, 88 for confinement, and 263 for sick
cases were cancelled by the persons concerned, and in 163 cases no a
request for help materialized after the application had been made.

The number of households assisted during the year was 957 of which
were in households where a confinement had occurred and 746 where there
cases of sickness, old age and infirmity. Of the latter number, 268 cases
assisted on more than one occasion and 478 cases were assisted on one occa
only, so that the number of such cases assisted over the year totalled 1,
making a grand total of 1,498 occasions where help was provided in cas
confinement, old age and infirmity and sickness.

Full-time help was given in cases of sickness and old age on 127 occasions d part-time assistance on 1,160 occasions. At the close of 1954, 94 con-nement cases and 30 sickness cases were registered as requiring attention ring 1955.

Contributions towards the cost of the Service are recovered from house-lders, and such contributions are assessed according to scales authorized by e City Council. The present method of assessment is no longer based on commendations made by the Association of Municipal Corporations, and ars a closer relationship to the cost of living index than was the case prior to t January, 1954. This more realistic method of assessing the cost of the rvice to the applicant has brought it within the financial range of a larger tion of the community which prior to January, 1954 frequently applied for lp but found the cost prohibitive. This fact has of course resulted in ater demands upon the service and has necessitated the reduction of the e spent by home helps on each case.

The following table indicates the distribution of cases where help was vided in 1954 throughout the various districts of the City, and also the mber of home helps residing in those districts :—

Distribution of cases assisted

Districts	Type of case assisted				Total		Distribution of full-time permanent and temporary Helps at 31st December, 1954			
	(*a*) Following confinement		(*b*) Sick and aged persons				*Full-time*		*Part-time*	
	1954	1953	1954	1953	1954	1953	1954	1953	1954	1953
nshawe, i.e., Northenden, Benchill, ton, Crossacres, Royal Oak, ley, Newall Green, Woodhouse Park Northern Moor	56	43	221	179	277	222	11	13	1	1
ry, Fallowfield and Withington ..	41	31	148	144	189	175	9	8	—	—
, Moston, New Moston and n Park	24	15	107	104	131	119	10	10	3	1
, Abbey Hey and Gorton	7	9	103	106	110	115	5	5	2	—
, Longsight and Levenshulme ..	24	18	147	157	171	175	4	8	1	3
n and Whalley Range	12	15	81	80	93	95	1	—	1	—
ide and Rusholme..	8	12	97	85	105	97	7	7	1	—
-on-Medlock and Hulme	7	9	65	54	72	63	7	5	1	—
m and Crumpsall	15	7	90	63	105	70	—	—	—	—
, Openshaw and Clayton	3	4	85	83	88	87	1	3	—	—
Heath and Miles Platting	7	1	73	70	80	71	3	1	—	—
st, Harpurhey, Ancoats, Beswick..	7	2	70	50	77	52	1	—	1	1
Totals	211	166	1,287	1,175	1,498	1,341	59	60	11	6

Types of cases assisted

	1954		1953	
Confinement cases ..	211		166	
Sickness cases	127	full-time	102	full-time
	1,160	part-time	1,073	part-time
Total ..	1,498	Total ..	1,341	

The figure of 1,287 may be sub-divided as follows :—

558 cases attended where the householders were too infirm on account of age to be able to care for themselves.

729 cases attended where the householders were unable to care for themselves or their families on account of illness or accident.

Comparison between types of cases attended in 1951, 1952, 1953 and 1954.

	1954	1953	1952	1951
Confinement cases ..	211	166	177	252
Sickness cases	1,287	1,175	1,024	747
Totals ..	1,498	1,341	1,201	999

FAMILY WELFARE SERVICE

The Family Welfare Service was started in Manchester in 1948 and its aims are:—

(*a*) to deal with adolescent problems and difficulties;

(*b*) to strengthen the ideas of the responsibilities of the home by seekin to prevent the break-up of marriage and the alienation of childre from their parents, and

(*c*) to promote the adjustment of unhappy and childless marriages.

The Service is directed by Lady Gertrude Jefferson, M.R.C.S., D.P.M., who i assisted by doctors and a social worker, all with psychiatric experience. Eac applicant is interviewed by a doctor but no physical examinations are made.

Sessions are held at two maternity and child welfare centres on Wednesda and Thursday afternoons, and a session is held on Monday evenings at th Darbishire House Health Centre.

An annual grant is made to this Service by the City Council under powe conferred by Section 28 of the National Health Service Act, 1946.

The Medical Officer of Health is indebted to Lady Gertrude Jefferson f the following report:—

" Family Welfare work in the three centres continues successfully, and have had most satisfying results this year. On our books there were 3 applicants, and of these, 231 were new cases. The total number of intervie given was 1,358, divided as follows :—

Monday evening	779
Wednesday afternoon	319
Thursday afternoon	260

We have analysed the number of old cases still attending, and find that were carried over from 1953, 24 from 1952, and the remainder as far back 948. There are only 4 cases from 1948, and although this may seem to be longed treatment, we look upon them in one sense as successes. When y first came to Family Welfare they were not able to maintain work, thereby ng a burden on the community, but with occasional supportive treatment few visits in a year—they are now fully employed and fill a useful place in iety.

An enquiry into the number of interviews given per person in the year ws that it is approximately 4. This, however, may give a misleading ression of how cases are handled, as the number of interviews varies greatly rding to need. An example of a very successful case, closed voluntarily, one of marital disharmony affecting a child, who reacted by destructive aviour, pilfering and lying at school. The husband had 15 interviews and wife 8.

This high number of interviews was necessary in order to bring about a per adjustment between husband and wife, which automatically reacted urably on the child, who ceased to be a candidate for the Child Guidance ic as she had seemed at first.

On the other hand some small proportion of applicants come only once, r problems requiring only useful advice and reassurance, and some not ly being suitable cases.

An interesting development in the sources of referral has been noted. re is an encouraging increase in the number of cases referred by doctors, cases as against 37 last year. This may be partly the result of an informal I was asked to give to the Wythenshawe doctors, early last year, on the k of Family Welfare.

The Marriage Guidance Council continues to be an important source of rral, the number referred having grown from 49 in 1953 to 78 in 1954.

Health visitors have sent some very suitable cases who respond well to tment. They have opportunities of noticing the mishandling of children, they deal with mothers who are lethargic and incapable of coping with their sehold duties or their children, and may be suffering from a mild degree ost-puerperal depression, or emotionally upset by marital problems. It ld appear, however, that most of the cases sent by health visitors come ugh the centres where our work is carried on. There might well be similar s in other districts if the health visitors understood more fully the type of we can help.

The age groups between 21 to 30, and 31 to 40, remain the highest, with a ter increase this year in the second group—31 to 40.

The problems represented again are similar with marital disharmony king first, and representing approximately half of those who come. Marital armony arises chiefly from incompatibility, which may be sub-divided —

1. temperamental incompatibility,
2. sexual incompatibility,
3. incompatibility due to background, resulting in different attitudes towards money, discipline of children, occupation of leisure, and religion.

Arising from these sources of disharmony, infidelity occurs frequently, bu
our experience is not usually the primary cause. One must include, of cou
physical or mental disability in one or both partners, and immaturit
character, which is not confined to the young. Drinking and gambling w
come under this heading as showing an undeveloped sense of responsibi
Interference from in-laws (always a problem) and housing difficulties, are
acute now than at the beginning of our work seven years ago. Although yo
couples cannot easily find suitable homes, fewer are compelled to live with t
in-laws and therefore are subject to less direct interference.

We have been very pleased that our Monday evening session at Ard
has now been transferred to Darbishire House. Applicants who came form
to Ardwick have expressed pleasure in seeing our new surroundings.
reporter of the " Manchester Evening News " who visited Darbishire H
published an article soon after on our work. This has resulted in a large in
of new cases at all centres, 60 in January, 37 women and 23 men, of w
18 men and 17 women came to Darbishire House. Previously the hig
number of new cases in any month had been 35.

This increase in the number of new applicants reveals how many pe
there are with urgent personal problems. It would, however, be impos
for us, with our present staff and number of sessions, to cope with this vol
of work if this inflow were continuous, and it has only been met by the dev
co-operation of our staff, particularly our psychiatric social worker,
voluntary helpers. The good results we have had have always depended on
ability to give considerable time to individual applicants during their perio
stress, and this we hope to be able to continue to do, when the present exce
number of new applicants has returned to more normal proportions."

VENEREAL DISEASES

Treatment of mothers and children for venereal disease has been conti
at two maternity and child welfare centres where one session weekly at
centre has been held.

The number of patients under treatment or observation at the beginni
the year was 101. At the end of the year the number was 90. All
resident in Manchester.

Particulars of attendances, new patients and treatment are shown in
accompanying table which is in the form required in the Ministry of H
returns.

Defaulters are followed up by health visitors who pay repeated v
including evening visits, when necessary, with a view to securing
attendances for treatment.

Contact tracing continues to present difficulties owing to inadequate inf
tion given, but whenever possible all contacts known to the Departmen
persuaded to attend a clinic.

e following table shows particulars of the work done during the year:—

	Syphilis		Gonorrhoea		Other Conditions		Totals		
	M.	F.	M.	F.	M.	F.	M.	F.	Totals
r of patients on 1st January under nt or observation	2	51	—	2	12	34	14	87	101
r of patients removed from the register any previous year which returned the year under report for treatment or ation of the same condition	—	2	—	—	—	—	—	2	2
r of patients dealt with for the first time the year under report (exclusive of those Item 4) suffering from :—									
(a) Syphilis, primary	—	—	—	—	—	—	—	—	—
(b) ,, secondary	—	1	—	—	—	—	—	1	1
(c) ,, latent in 1st year of infection	—	—	—	—	—	—	—	—	—
(d) ,, cardio-vascular	—	—	—	—	—	—	—	—	—
(e) ,, of the nervous system ..	—	—	—	—	—	—	—	—	—
(f) ,, all other late or latent stages	—	9	—	—	—	—	—	9	9
(g) ,, congenital (under 1 year)	—	—	—	—	—	—	—	—	—
(h) ,, ,, (over 1 year) ..	—	2	—	—	—	—	—	2	2
(i) Gonorrhoea	—	—	—	4	—	—	—	4	4
(j) Chancroid	—	—	—	—	—	—	—	—	—
(k) Lymphogranuloma venereum .. .. (Syn. Lymphogranuloma inguinale)	—	—	—	—	—	—	—	—	—
(l) Granuloma inguinale .. .. .. (Syn. Granuloma venereum)	—	—	—	—	—	—	—	—	—
(m) Non-gonococcal urethritis (males only)	—	—	—	—	—	—	—	—	—
(n) Any other conditions requiring treatment	—	—	—	—	—	61	—	61	61
(o) Conditions not requiring treatment ..	—	—	—	—	51	101	51	101	152
(p) Conditions remaining undiagnosed at 31st December	—	—	—	—	—	—	—	—	—
r of patients dealt with for the first time ave been transferred from other Centres r Service) or from practitioners affiliated r centres	—	1	—	—	—	—	—	1	1
Items 1, 2, 3 and 4	2	66	—	6	63	196	65	268	333
r of patients suffering from syphilis and hoea discharged after completion of treat- nd the final tests of cure, or who were sed as " other conditions "	—	4	—	—	54	166	54	170	224
r of patients suffering from :—									
(a) Syphilis who defaulted after completion of treatment, but before final discharge	—	2	—	—	—	—	—	2	2
(b) Gonorrhoea who defaulted before 3 months	—	—	—	1	—	—	—	1	1
(c) Gonorrhoea who defaulted after 3 months	—	—	—	2	—	—	—	2	2
r of patients who ceased to attend completion of treatment and were g from :—									
(a) Acquired syphilis of less than 1 year's duration	—	—	—	—	—	—	—	—	—
(b) Acquired syphilis of more than 1 year's duration	—	9	—	—	—	—	—	9	9
(c) Congenital syphilis (under 1 year) ..	—	—	—	—	—	—	—	—	—
(d) ,, ,, (over 1 year) ..	—	—	—	—	—	—	—	—	—
(e) Gonorrhoea	—	—	—	—	—	—	—	—	—
r of patients under treatment or servation *known* to have died :—									
(a) From syphilis	—	—	—	—	—	—	—	—	—
(b) From treatment	—	—	—	—	—	—	—	—	—
(c) From other causes	—	—	—	—	—	—	—	—	—
Items 5, 6, 7 and 8	—	15	—	3	54	166	54	184	238
r of patients transferred to other Centres itutions or to private practitioners	1	4	—	—	—	—	1	4	5
r of patients remaining under treatment rvation on 31st December	1	47	—	3	9	30	10	80	90
Items 5, 6, 7, 8, 9, and 10	2	66	—	6	63	196	65	268	333

	Syphilis		Gonorrhoea		Other Conditions		Totals	
	M.	F.	M.	F.	M.	F.	M.	F.
11. Number of patients included in Item 7 who failed to complete one course of treatment of either penicillin or of arsenic and bismuth and were suffering from :—								
(*a*) Acquired syphilis of less than 1 year's duration	—	—	—	—	—	—	—	—
(*b*) Acquired syphilis of more than 1 year's duration	—	—	—	—	—	—	—	—
(*c*) Congenital syphilis of less than 1 year's duration	—	—	—	—	—	—	—	—
(*d*) Congenital syphilis of more than 1 year's duration	—	—	—	—	—	—	—	—
12. Number of attendances :—								
(*a*) for individual attention by the physician	4	367	—	52	75	451	79	870
(*b*) for intermediate treatment, e.g., dressings, etc.	—	—	—	—	—	—	—	—
Total attendances	4	367	—	52	75	451	79	870

	Under 1 year		1 and under 5 years		5 and under 15 years		15 years and over		Tot
	M.	F.	M.	F.	M.	F.	M.	F.	M.
13. Number of patients suffering from congenital syphilis in Item 3 above classified according to age	—	—	—	—	—	—	—	2	—

	Microscopical		Cultural	Serum		Cerebro-spinal fluid
	for Syphilis	for Gonorrhoea		for Syphilis	for Gonorrhoea	
14. Pathological work :—						
(*a*) Number of specimens examined at, and by the physician of, the Treatment Centre	—	—	—	—	—	—
(*b*) Number of specimens from patients at the Treatment Centre sent to a pathological laboratory	—	260	—	399	14	—

	Syphilis (less than 1 year)		Syphilis (more than 1 year)		Gonorrhoea		Ot Cond
	M.	F.	M.	F.	M.	F.	M.
15. Contacts attending for examination through the agency of :—							
(*a*) Patients	—	—	—	—	—	—	—
(*b*) Health visitor or Social Service worker ..	—	—	—	—	—	—	—
Totals	—	—	—	—	—	—	—

Section 3

nitary Services Division

- INTRODUCTION
- WATER SUPPLY
- FOOD SUPPLY:
  - Hygiene
  - Milk and ice cream control
  - Adulteration
  - Meat (Markets Department)
- SMOKE ABATEMENT:
  - Industrial
  - Smokeless areas
  - Recording of atmospheric pollution
- HOUSING CONDITIONS:
  - Disrepair
  - Post-war clearance areas
  - Pre-war clearance areas
  - Individually unfit houses
  - Re-housing: medical circumstances
  - Abatement of overcrowding
  - Improvement grants
  - Houses let-in-lodgings
  - Common lodging-houses
  - Caravan dwellings
  - Canal boats
- OCCUPATIONAL CONDITIONS:
  - Factories
  - Factory outworkers
  - Shops and employment of young persons
- GENERAL SANITARY CONDITIONS:
  - Infectious diseases
  - Rodent control
  - Eradication of insect pests
  - Drainage works (defects and repairs)
  - Sanitary accommodation
  - Tipping of refuse
  - Offensive trades
  - Effluvium nuisances
  - Noise
  - Land used for pleasure fairs
  - Rag flock and other filling materials
  - Export of washed rags and second-hand clothing
  - Exchange of toys for rags
  - Swimming baths
  - Establishments for massage or special treatment
  - Hairdressers and barbers
  - Sale of certain poisons
  - Exhumations
  - Public mortuaries
- PUBLIC CONVENIENCES
- PUBLIC ANALYST

SANITARY SERVICES DIVISION

J. **Graham,** F.S.I.A., M.R.S.I., Chief Sanitary Inspector

The co-ordination of the activities of the staff dealing with the various
ironmental and food hygiene duties of the Division has continued in spite
he many problems which have arisen from time to time as to which of the
es presented the most pressing need for urgent attention. It has not been
sible during the post-war years to pursue a policy of regular routine house
ouse inspection as well as give attention to complaints received by the
artment. This has been due, not only to shortage of staff, but also to the
d deterioration of so much of the house property of the City. The result
been that the greater part of the work has perforce related to inspection
omplaint of tenants, and this has generally to be followed by more than one
sit to ensure that work has been done, or in default, by the time-consuming
s necessary prior to legal action.

t has thus remained necessary to concentrate the attention of the depleted
ectorate, to which reference is made later, on sub-standard housing
itions as one of the most vital problems of the City, with especial regard to
ring essential repairs. Systematic inspections with a view to representation
reas for clearance have also been carried out, and details of this work and
expansion associated with the new Housing Repairs and Rents Act, are
tained in the housing section of this report.

Clean air has long been recognised as a basic policy in Manchester where
e measure of success can be claimed for the efforts to combat smoke
ution by the creation of the central smokeless zone, and by continual
ection to prevent smoke nuisance arising from industrial sources elsewhere
e City. The limitations of existing legislation, however, do not sufficiently
r certain industrial firms from habitually polluting the atmosphere, but the
pects have been brightened by recommendations of the final report of the
er Committee on Air Pollution published during the year and accepted in
ciple by the Government with assurances of early legislation.

imilarly, in respect of clean food, the Food and Drugs Amendment Act,
, together with proposed regulations, drafts of which have been the subject
o much comment and revision during the year, promise more specific
sures to strengthen the Department's activities in this work.

oncerning the Department's inspectorial establishment, post-war years
been characterized by recurring crises and uneasy partial recoveries, so
h so that during the year it was clear that the state then reached demanded
gnition by the National Joint Council. The rate of the loss of experienced
ectors to other local authorities had long exceeded the ability of the Depart-
t to replace them and, indeed, it was only possible on odd occasions to
it a newly qualified inspector. The effective performance of many duties
thus rendered impossible and important work, including that concerned
sub-standard housing, could be attempted only at the expense of other
lly important duties. Accordingly, representations were made to the
onal Joint Council which accepted the acute seriousness of Manchester's
mstances, and salary gradings were recommended for the inspectors which
implemented by the City Council towards the end of the year. The
t was that vacancies for 33 district sanitary inspectors (representing 65·9
ent. of that establishment) were reduced to 8 by the recruitment of inspec-
who were in the main already experienced, and it became possible for a
mined attack to be started on both arrears and current work which was
nding considerably.

It is appropriate here to record appreciation of the teamwork of inspectors who during the prolonged periods of acute shortage of staff wl coincided with exceptional demands on their services, diligently strove to c with the situation and averted a complete breakdown.

Inspections and visits

Water

To obtain samples of water for chemical and bacteriological examination	

Food supply

Restaurants and snack bars	
Factory canteens	
Bakehouses	
Food preparation premises	
Markets re sale of food	
Shops re sale of food	1
Hotels, beerhouses	
Hawkers of food and storage premises	
Dairies and milk shops for milk samples	
Shops for other food and drugs samples	
Observations at shops, markets, etc. re sampling	2
Farms : "Appeal to Cow" samples, etc.	
Registered premises of wholesale margarine dealers	
Dairies	
Pasteurizing and sterilizing premises	2
Hospitals, schools and day nurseries	
Shops selling bottled milk	
Synthetic cream premises	
Premises used for the manufacture of ice cream	
Premises used for the sale of ice cream	

Smoke abatement

Works, etc.	3

Housing conditions

Primary inspections of dwelling-houses under the Public Health Act, 1936	15
Subsequent inspections of dwelling houses under the Public Health Act, 1936	22
Primary inspections of dwelling houses under the Housing Act, 1936	1
Subsequent inspections of dwelling houses under the Housing Act, 1936	
Overcrowding	
Re-housing and medical cases	2
Applications for improvement grants	
Houses-let-in-lodgings	
Common lodging-houses	
Caravan dwellings	
Canal boats	
Supervision of work in default	6

Occupational conditions

Homes of outworkers	1
Factories	1
Shops re Shops Act	2
Other business premises	1

ectious diseases

Primary visits after notification	1457
Subsequent visits	90
Contacts	302
Food poisoning	243

neral sanitary conditions

Hospitals, institutions, nursing homes and agencies	97
Rat infestation	1349
Refuse tips	26
Verminous premises	24
Offensive trades	55
Effluvium nuisances	647
Noise	172
Rag flock and other filling materials	324
Export of washed rags and second-hand clothing	40
Swimming baths	54
Establishments for massage or special treatment	102
Hairdressers and barbers shops—Manchester Corporation Act, 1950	165
Sale of certain poisons—Pharmacy and Poisons Act, 1933	181
Exhumations	3
Infirm persons	10
Cinemas, theatres, dance and billiard halls	84
Land used by pleasure fairs	68
Premises for the purpose of examination of drains	318
Rag and bone dealers' barrows	7
Land, refuse deposits, etc.	685
Cesspools, pailclosets, etc.	241
Water courses	43
Streets, passages, roadways and footpaths	1036
Railway stations	26
Stables	27
Piggeries	36
Slaughterhouses	7
Steam disinfectors	3
Sanitary accommodation etc., at schools, churches	58
Sanitary accommodation, etc., at parks	91
Public sanitary conveniences	81
Miscellaneous	19392

WATER SUPPLY

hirlmere and Haweswater in the Lake District, approximately 80 and 100 distant respectively, are the main sources of the City's water supply nted by approximately 20 million gallons daily from the Longdendale reservoirs about 18 miles east of Manchester.

stribution is secured through service reservoirs at Prestwich, Heaton Park, nshaw, Godley, Denton, Gorton and Bowden by trunk mains ; the various istricts served from a particular reservoir depend to some extent on ion, the pressure of the supply to districts at higher levels, however, increased by means of boosters.

llowing complaint or as routine measures, 119 samples were taken at ng-houses, shops, hospitals, dairies, canteens, convalescent homes and g homes. Of these samples, 59 were submitted for bacteriological nation and 60 for chemical analysis. The reports indicated rather unsatisfactory but not dangerous conditions in eight bacteriological and 26 cher samples, representing 28 different premises. Faecal coli were not foun any of the samples taken : non-faecal coli were found in eight of the san but on no occasion did these exceed five per 100 mls.

The Engineer and Manager of the Waterworks Department was infor of all the results and in the case of those unsatisfactory, examination of fu samples gave satisfactory reports.

The following statement summarises the bacteriological results of 59 samples :—

District	No. of samples	Samples free from coliform bacteria	Faecal coli found		Non-faecal coli found		Service reservoir or aqueduct	So
			No. of samples	No. per 100 mls.	No. of samples	No. per 100 mls.		
Ancoats	2	1	—	—	1	1	Godley	Long
Ardwick	2	2	—	—	—	—	Denton and Audenshaw	Long
Baguley	1	1	—	—	—	—	Thirlmere aqueduct	Thi
Beswick	2	2	—	—	—	—	Denton and Audenshaw	Long
Blackley	3	3	—	—	—	—	Heaton Park	Thi
Bradford	1	1	—	—	—	—	Audenshaw	Long
Burnage	1	1	—	—	—	—	Audenshaw	Long
Chorlton-cum-Hardy	2	2	—	—	—	—	Audenshaw	Long
Chorlton-on-Medlock	1	1	—	—	—	—	Audenshaw	Lon
City	1	1	—	—	—	—	Audenshaw	Lon
Collyhurst	2	2	—	—	—	—	(1) Denton and Audenshaw (1) Prestwich	Lon Th
Crumpsall	1	1	—	—	—		Heaton Park	Thi
Didsbury	2	2	—	—	—	—	Audenshaw	Lon
Fallowfield	2	1	—	—	1	1	Audenshaw	Lon
Gorton	1	1	—	—	—	—	Denton and Audenshaw	Lon
Harpurhey	5	4	—	—	1	5	Heaton Park	Th
Hulme	4	4	—	—	—	—	Audenshaw	Lon
Levenshulme ..	1	1	—	—	—	—	Audenshaw	Lon
Longsight	2	1	—	—	1	3	Audenshaw	Lon
Miles Platting ..	2	2	—	—	—	—	Godley	Lon
Moss Side	3	2	—	—	1	1	Audenshaw	Lon
Moston	2	2	—	—	—	—	Heaton Park	Th
Newton Heath ..	5	4	—	—	1	1	Godley	Lon
Northenden ..	1	1	—	—	—	—	Thirlmere aqueduct	Th
Rusholme	1	1	—	—	—	—	Audenshaw	Lon
West Gorton ..	2	1	—	—	1	1	Denton and Audenshaw	Lo
Whalley Range ..	2	2	—	—	—	—	Audenshaw	Lon
Withington.. ..	5	4	—	—	1	1	Audenshaw	Lo

Thirty-nine complaints concerning the quality of the water were re during the year and the majority referred to a discolouration characteri the Longdendale water, which varies with the weather and season, and on some occasions aesthetically objectionable, is harmless.

he Longdendale supply, however, although sterilized before entering the bution system, is not filtered and the Waterworks Committee intend to rtake the necessary works for that purpose. In the meantime, protection e source from contamination is the subject of concern which has necessi- restrictions upon access to the gathering grounds and caused the oration to object to a particular part of the designated Pennine Way een Laddow Rocks and Black Hill in proximity to the Crowden Great k. This objection was dealt with at a public inquiry held by the Ministry ousing and Local Government during July, following which the Minister ted proposals made by the Corporation for an alternative route.

was not found necessary during the year to serve any notices invoking Vater Act of 1945, and the Public Health Act, 1936, with regard to icient water supply, all cases of this type being resolved by communications e Water Department and/or the owner of the premises concerned.

ollowing periodical sampling of the water supplies at five school holiday s belonging to the Manchester Education Committee but situated outside chester, it was found that the drinking water supply was unsatisfactory. precaution against any water borne infection, the camps were temporarily d pending satisfactory water supplies being obtained.

he Engineer and Manager of the Waterworks Department has furnished the ving information in connection with Manchester's water supply :—

he Engineer and Manager of the Manchester Corporation Waterworks furnished the following information in connection with Manchester's supply:—

The water supply has been satisfactory both in quality and quantity.

Regular samples are taken for bacteriological examination of the raw water and of he treated water going into supply. Out of the 773 samples examined in 1954, 686 were found to be free from bacteria. Typical chemical analyses of the sources of supply are given later in this report.

The Thirlmere and Longdendale supplies are treated with hydrated lime. This has proved effective in limiting the maximum lead content found in samples given overnight contact with lead service pipes to less than 0.2 parts per million.

It has proved impracticable to prevent access of seagulls to the larger service reservoirs. Pollution from this source is dealt with by chlorination at the outlets of the reservoirs.

TYPICAL ANALYSES

1) Thirlmere and Haweswater Lakes.

The supply from these lakes is subject only to slight variations and the following are ypical analyses:—

	Thirlmere	*Haweswater*
pH value	6·0	6·6
Colour as p.p.m. platinum	12	7
Turbidity p.p.m. silica scale	2·5	0·8
	Parts per million	
Total solids dried at 180°C.	30	36
Free acidity as CO_2	4	1
Alkalinity as $CaCO_3$	5	10
Total hardness as $CaCO_3$	11	17
Chlorides as Cl_2	7	5
Nitrates as N_2	0·17	0·15
Ammoniacal nitrogen as N_2	0·02	0·02
Albuminoid nitrogen as N_2	0·03	0·05
Oxygen absorbed test, 4 hours at 27°C.	0·78	0·72
Silica as SiO_2	2·5	2·0
Iron as Fe	0·06	0·05
Manganese as Mn	nil	nil

(2) THIRLMERE SUPPLY. *As taken from house taps.*

Date	May 12th	Septemb
Lab. no.	4311	440
pH value	7·0	6·
Colour as p.p.m. platinum	8	9
Turbidity p.p.m. silica scale	0·6	0·
Odour: Cold or hot	nil	ni
Taste: Cold or hot	nil	ni
	Parts per million	
Total solids dried at 180°C.	37	38
Free acidity as CO_2	1	1
Alkalinity as $CaCO_3$	11	12
Total hardness as $CaCO_3$	18	20
Chlorides as Cl_2	6	7
Nitrates as N_2	0·28	0·
Nitrites as N_2	nil	tr.
Ammoniacal nitrogen as N_2	0·01	0·
Albuminoid nitrogen as N_2	0·02	0·
Oxygen absorbed test, 4 hours at 27°C.	0·66	0·
Silica as SiO_2	2·5	3
Iron as Fe	0·08	0·
Manganese as Mn	0·02	ni

(3) LONGDENDALE AQUEDUCT SUPPLY. *Raw water.*

This supply, derived from the peaty Longdendale gathering ground, is sub wide seasonal variations as indicated by the following results:—

pH value	4·0	to	6·5
Colour as p.p.m. platinum	13	to	90
Turbidity p.p.m. silica scale	3	to	18
	Parts per million		
Total solids dried at 180°C.	60	to	75
Free acidity as CO_2	4	to	10
Alkalinity as $CaCO_3$	nil	to	7
Total hardness as $CaCO_3$	24	to	33
Chlorides as Cl_2	8	to	11
Nitrates as N_2	0·40	to	0·60
Ammoniacal nitrogen as N_2	0·02	to	0·05
Albuminoid nitrogen as N_2	0·05	to	0·10
Oxygen absorbed test, 4 hours at 27°C.	0·90	to	5·00
Silica as SiO_2	5	to	9
Iron as Fe	0·18	to	0·52
Manganese as Mn	0·10	to	0·15

(4) LONGDENDALE AQUEDUCT SUPPLY. *Taken as leaving Godley Reservoir.*

Date	April 29th	December
Lab. no.	4304	4491
pH value	8·3	7·1
Colour as p.p.m. platinum	25	72
Turbidity p.p.m. silica scale	7·0	9·3
Odour: Cold or hot	nil	nil
Taste: Cold or hot	nil	nil
	Parts per million	
Total solids dried at 180°C.	75	67
Free acidity as CO_2	nil	1
Free alkalinity as $CaCO_3$	1	nil
Total alkalinity as $CaCO_3$	11	15
Total hardness as $CaCO_3$	35	36
Chlorides as Cl_2	10	9
Nitrates as N_2	0·58	0·46
Nitrites as N_2	nil	nil
Ammoniacal nitrogen as N_2	0·15	0·17
Albuminoid nitrogen as N_2	0·05	0·09
Oxygen absorbed test, 4 hours at 27°C.	1·57	4·24
Silica as SiO_2	7	9
Iron as Fe	0·32	0·30
Manganese as Mn	0·11	0·07

NOTE.—This supply is sterilized by the chloramine process, which accounts bulk of the ammoniacal nitrogen present, as well as traces of nitrite present.

PLUMBO-SOLVENCY

hirlmere and Haweswater Supply

The untreated lake waters have fairly low plumbo-solvent action, but the water as
ıving Thirlmere is neutralized with hydrated lime to raise the pH value of the mixed
stributed waters to around 7·0. Plumbo-solvency tests have not been carried out this
ar, but past records indicate that the lead content in water which has stood in contact
th lead service pipes overnight is very definitely less than 0·2 p.p.m.Pb.

ongdendale Supply

The untreated water has a marked plumbo-solvent action. It is treated with hydrated
ne to raise the pH value on distribution to 7·0 to 8·5. Plumbo-solvency tests have not
en carried out this year, but records show that such treated water left in contact with
ıd service pipes overnight has a lead content not exceeding 0·2 p.p.m.Pb.

BACTERIOLOGICAL REPORT

Aqueducts and service reservoirs

	Total number of samples	Samples free from coliform bacteria	Faecal coli present		Non-faecal coli present	
			No. of samples	No. per 100 mls.	No. of samples	No. per 100 mls.
queducts						
re	1	1	0	—	0	—
dale..	47	9	29	1–160	32	1–50
ce reservoirs						
aw No. 1 ..	23	3	19	1–600	17	1–600
No. 2 ..	25	1	20	1–1800 +	19	1–1800 +
No. 3 ..	25	1	24	1–1800 +	19	2–350
No. 1	11	5	4	1	6	1–20
No. 2	11	6	4	1–7	4	1
ılet	47	36	6	1–8	9	1–13
utlet	48	45	3	1	1	25
'ark	28	0	26	1–350	21	1–350
No. 1 ..	24	15	4	1–90	8	1–90

Water from Haweswater and Thirlmere lakes is chlorinated in the aqueducts near
headworks. It is re-chlorinated before it enters the Manchester area of supply.
ılts for the supply distributed direct from the Thirlmere aqueduct are given in the
table.

Longdendale aqueduct results represent the water prior to chlorination. The
rinated water enters Godley reservoir and sufficient chlorine is added (as chloramine)
aintain a chlorine residual in the water leaving the reservoir.

Godley outlet water represents the water entering the distribution system. The
ıples with 1 faecal coli each were well separated in time. When the 1 sample showed
on-faecal coli per 100 mls. repeat sample was taken and this, as well as samples on
bution, was free from coli.

The very high coliform counts found at times in the water in the Audenshaw and
n Park reservoirs are due to contamination by gulls.

restwich No. 1 reservoir received a local contamination due to some repair work
he coli were found in the reservoir over a period of some weeks. The 4 samples
faecal coli gave counts of 90, 50, 2 and 1 per 100 mls. The non-faecal coli counts
ed from the same occurrence. The water leaving the reservoir, of course, is
inated.

Chlorinated water supplies on distribution

	Total number of samples	Samples free from coliform bacteria	Faecal coli present		Non-faecal coli p	
			No. of samples	No. per 100 mls.	No. of samples	No 100
Audenshaw	156	132	11	1–5 *a*	20	1–
Denton	103	85	4	1–25 *b*	17	1–
Godley	116	110	0	—	6	1–
Heaton Park	147	123	10	1–8 *d*	20	1–
Prestwich	104	97	2	1–8 *e*	7	1–
Thirlmere aqueduct ..	147	139	1	1 *f*	7	1–
Total	773	686	28	—	77	

NOTES:—

(*a*) During the period 12th to 17th February, 8 samples on supply were fou contain 1 to 5 faecal coli per 100 mls. and 4 of these samples also con 3 to 25 non-faecal coli—the maximum total count was 30 per 100 mls. results were accounted for by the fact that the reservoirs were frozen leaving only small areas of open water and pollution due to gulls was i and subject to violent changes. Total coli counts of 3,600 + and 2, per 100 mls. were obtained (faecal coli counts of 1,800 + in both Chlorine treatment was maintained at the maximum for the plant, bu evidently just fell short of perfection, for the worst sample on distri represented over 98·5 per cent. sterilization on the total coli count an 99·7 per cent. on the faecal coli count. Even changing the reservoir in s i.e. to the one with the least pollution as indicated by tests, was resorte an endeavour to reduce the bacterial load to be dealt with by the chlorine but in a few days it was found that the reservoir with the lower coli cou become the one with the higher count. It was not possible to treat the res to reduce the pollution as they were frozen over. This was a very difficult

The freezing conditions ended suddenly, the reservoirs became well the coli counts fell to below 100 per 100 mls. and the distributed supply re its normal excellent bacteriological quality just as suddenly.

From March to July the gull pollution is very low, but with their re August, the pollution increases rapidly and by September of this year coli of the order of 700 per 100 mls. were found. Despite chlorine treat maximum, 6 samples with total coli counts of 1 to 4 per 100 mls. (fae counts of 1, 1 and 2 in 3 samples only) were obtained from 14 sample during the period 8th to 29th September. The reservoirs were treated with sulphate to reduce the coliform counts and the water on distribution bacteriologically excellent once more.

It should be recorded that numerous experiments have been tried to or prevent the pollution by gulls and the Ministry of Housing and Local ment is fully aware of the immensity of our problem and of our atte cope with it. A method was commenced towards the end of the y preliminary results are encouraging.

In the two periods mentioned above, 10 samples gave non-faecal coli as follows:—

	Number of non-faecal coli per 100 mls. of water
4 samples	1
2 ,, ...	2
1 sample	3
1 ,, ...	5
1 ,, ...	8
1 ,, ...	25

Apart from these 10, 10 other samples well scattered over the year c non-faecal coli, in each case the count being 1 per 100 mls. These coli ar from "aftergrowths" in deposits in the mains, for 25 other samples the same days as the above 10 were free from coliform bacteria.

(*b*) An area set up for waste detection suffered badly from disturbance of mains deposits, which resulted in coliform bacteria, derived from " aftergrowths " in these deposits, being found in the supply in this limited area. The general supply, apart from this area, was excellent. The 11 samples with coliform bacteria taken during this period, 21st July to 18th August, gave the following results:—

Faecal coli	1 sample.. ..	25	Number per 100 mls. of water
Non-faecal coli ..	3 samples ..	180+	
	2 ,, ..	160	
	2 ,, ..	25	
	1 sample.. ..	17	
	2 samples ..	5	
	1 sample.. ..	1	

Flushing on 2 occasions during this period finally eradicated the coliform bacteria.

Apart from the above, 7 other samples contained coliform bacteria during the year,as follows:—

Faecal coli	3 samples ..	1	Number per 100 mls. of water
Non-faecal coli ..	6 ,, ..	1	
	1 sample.. ..	2	

These coli were derived from " aftergrowths " in deposits in the mains, for 8 samples taken on the same days were free from coli.

(c) These 6 samples were well scattered in time throughout the year. The coli counts, all *non-faecal*, were as follows:—

2 samples	1	Number per 100 mls. of water
2 ,, ...	5	
1 sample	13	
1 ,, ...	25	

Two to 4 other samples taken on supply on the same days as the above, as well as the water leaving Godley reservoir for supply, were all free from coli. These results were all due to very localized disturbances, the coli being derived from mains deposits.

(d) Icing trouble at the chlorine plant during 17th to 24th February resulted in 6 samples taken on supply containing coli as follows:—

5 samples contained 1, 2, 5, 5 and 8 faecal coli per 100 mls. respectively.
4 samples contained 1, 1, 2 and 5 non-faecal coli per 100 mls. respectively.

The maximum coliform count was 8 per 100 mls. and, for comparison, the raw water contained 35 coli per 100 mls., which is a relatively low count as the reservoir has been treated with copper sulphate late in January to reduce the pollution. Four other samples on supply during this period were free from coliform bacteria.

Apart from the above, 18 other samples taken on 16 days over the year contained coliform bacteria. On the same days, 33 other samples were free from coliform bacteria. The coliform counts in the 18 samples were as follows:—

Faecal coli present
5 samples with counts of 1, 1, 2, 2 and 3 per 100 mls.

Non-faecal coli present

10 samples ..	1	Number per 100 mls. of water
2 ,, ..	2	
1 sample ..	3	
3 samples ..	5	

All of these results were due to " aftergrowths " and/or disturbances of deposits in mains, such as flushing, etc.

Apart from the chlorine ice trouble in mid-February, the chlorination has been applied continuously throughout the year.

On 2 occasions this year, the coliform counts in the reservoir water rose to very high values and these were reduced by treatment of the reservoir with copper sulphate.

(*e*) Two samples, 2 months apart in time, contained 1 and 8 faecal coli per 100 mls. Two other samples on each of these dates were free from coli.

Non-faecal coli were found in 7 samples scattered over the year, 6 of these contained 1 and 1 sample contained 2 coli per 100 mls. Other samples taken on the same dates were free from coliform bacteria.

All the above results were due to " aftergrowths " and/or disturbances of deposits in mains.

(*f*) Only 1 sample on supply contained faecal coli and that gave a count of 100 mls.

Non-faecal coli were found in 7 other samples as follows:—

3 samples	1	Number per 100 mls. of water
1 sample	2	
1 ,,	8	
1 ,,	25	
1 ,,	160	

The samples with 8, 25 and 160 coli were all caused through distur of deposits in mains. The coli in the sample with the count of 160 wer attenuated. Six repeat samples covering these 3 occasions (in 3 separate m actually) were all free from coli.

GENERAL

Chlorination of the supplies has been maintained during the whole of the Flushing of the mains as a general practice has been carried out.

Aftergrowths of coliform bacteria in deposits in the mains has again resul some of the samples of the distributed water containing coliform bacteria and on occ when these deposits have been disturbed, samples have given high coliform count in either case the bulk of the bacteria have been non-faecal types.

The general water supply has given the following results on distribution:—

Total number of samples..	821	
Samples free from all coli in 100 mls.	731	89·0 per
Samples free from faecal coli in 100 mls.	790	96·2 per
Samples free from or containing only 1 faecal coli per 100 mls.	804	97·9 pe
Samples free from or containing only 1 or 2 faecal coli per 100 mls.	811	98·8 pe
Samples free from or containing not more than 3 faecal coli per 100 mls.	814	99·1 pe

The bacteriological quality of the distributed water supply has been maintain very satisfactory standard throughout the year.

ADDITIONAL RESULTS

	Total number of samples	Samples free from coliform bacteria	Faecal coli present		Non-faecal coli
			No. of samples	No. per 100 mls.	No. of samples
Service reservoirs					
Bowdon	13	8	3	1	4
Gorton upper	13	2	9	1—35	10
Gorton lower	13	2	9	1—35	11
Supplies					
Bowdon	89	76	5	1	11
Denton purification plant	44	41	1	1	3

NOTES:—

(*a*) This supply is continuously chlorinated and the results on supply ar coliform bacteria derived from " aftergrowths " in deposits in the main other samples taken at the same time as those with coli were of excellent i.e. coli free. This year's results show a tremendous improvement on l figures.

The coliform counts per 100 mls. of water were as follows:—

Faecal coli	5 samples ..	1
Non-faecal coli ..	7 samples ..	1
	2 ,, ..	2
	1 sample ..	3
	1 ,, ..	5

(*b*) A very localized disturbance, with even reversal of flow, caused 3 samples within a fortnight to give the following results:—

Coliform bacteria per 100 *mls.*		
Faecal	*Non-faecal*	*Total*
1	30	31
0	8	8
0	1	1

All other samples throughout the year were coli-free.

nents of the Medical Officer of Health on the water supply

ı the Annual Report for 1953 the Medical Officer of Health commented rsely on the bacteriological reports. The whole of his comments then are cable to the position now.

FOOD SUPPLY

he principal legislation dealing with the composition of food and the ıutions to be taken to prevent its contamination has remained that ıined in the Food and Drugs Act, 1938, and the amending Act of 1950. ıtion has, however, been increasingly directed to the desirability of both and more specific powers, and this culminated in the Food and Drugs ıdment Act, 1954. At the present only one section is operative, i.e., that ıg with private slaughterhouses.

ıe new Act is intended to provide for more effective control of the tions under which food is manufactured, prepared and sold ; to give provisions for the registration of food premises and the licensing of food ers ; by more strict supervision to prevent the addition of injurious lients to food ; and by the establishment of permanent legislation to l the labelling and advertisement of food.

ıe introduction of the suggested measures gave rise to controversy. This ularly concerned the contemplated provisions for registration and the draft tions relating to food hygiene. Three different drafts of food hygiene tions were prepared for discussion : the first formed a most comprehen- etailed series, virtually embodying the recommendations of the working s which have considered the catering and meat product trades in recent and also the findings of the Interdepartmental Committee on Meat tion. This was succeeded by a drastically shortened draft, described by as an emasculated version, accompanied by suggested codes of practice would not be of compulsory application. Subsequently, a revised draft gulations, together with altered codes, was issued and represents a omise between the earlier attempts.

hilst these contemplated regulations will be concerned with food hygiene, nal regulations may be anticipated to implement recommendations made -committees of the Food Standards Committee, e.g., on preservatives, ic contamination and colouring matter in foods. After some un- ıty over a long period, the Minister of Food announced during the year ıe use of agene as an improver in flour was to cease.

e Corporation was successful in obtaining the powers suggested by the tment and included in the Bill which became the Manchester Corporation 954, to secure more effective control of the conditions in which tion cream " is manufactured, and to require the licensing of premises ch poultry is slaughtered.

Hygiene

With the exception of milk and ice cream, which are referred to later in t report, the legal provisions for safeguarding the hygiene of food are contai in the Food and Drugs Act, 1938, Sections 13 and 14 (the former of whic repealed by the amending Act of 1954) ; Manchester's Food Byelaws, 195 part of the Public Health Meat Regulations 1924 and Section 41 of Manchester Corporation Act, 1946, relating to the registration of food hawke

The types of premises to which these apply include restaurant kitche snack bars, licensed premises, factory canteens, bakehouses, open air mark and food shops in general, and, in spite of an acute shortage of inspect coinciding with unprecedented demands on their services for other duties was possible to carry out 2,495 inspections of such food premises. At premises unsatisfactory conditions were found, but were promptly remed by the occupiers without the necessity for further action. In one other c however, the unsatisfactory conditions were such as to warrant prosecution contraventions of Section 13 of the Food and Drugs Act, 1938. Fines totall £20 were imposed by the Court in respect of 10 different infringements.

Whilst the Department is satisfied that to ensure the adoption maintenance of hygienic methods of handling and preparing food, rout inspections, directed primarily to enforcement of statutory or byelaw standar are necessary, quite clearly much can be done by traders themselves and by public. The provision of modern equipment greatly assists in the prevent of contamination of food, but the real fundamental need is the constant prac of simple cleanliness by the person in his habits and his surroundings. basic principles are universally identical whether in the shop, restaur bakehouse, factory, home or school—the only difference being the manne their application to the particular environment. Once this is grasped problem of food hygiene can be seen in its true perspective and its solutio readily at hand. In the meantime, the sanitary inspectors, whilst underta their duties in the enforcement of statutory requirements, do endeavou stress the personal aspect of the prevention of food contamination. addition where sought, they have addressed groups of food handlers on the ca and risks of food poisoning and its prevention.

Investigations were made of 107 cases of food poisoning. Of these, 52 ca representing 10 outbreaks, were caused by organisms which were identi whilst the causal organisms of 16 cases in five outbreaks were not discove In the remaining 39 individual cases the causal organisms were identified in The largest outbreak in the City involved six persons in one household, another outbreak occurred after a wedding meal in a neighbouring borough, included 23 Manchester residents.

No outbreak was found to be associated with food prepared in kitchen catering establishments, schools or factories.

A summary of food poisoning cases is contained in the Epidemiology sec of the report.

The importance of rodents as carriers of the causative organisms in c of food poisoning is generally recognized, and on different occasions inves tions have implicated rats or mice with notified cases. The results of examinations of those rodent specimens, however, relate only to investigations of localized outbreaks, and an inquiry is being undertaken the object of determining the general incidence of salmonellae in rodents. this purpose, specimens are being collected by the Department from tim time from various parts of the City. These are being examined by Dr. M Parker of the Public Health Laboratory and the findings will be the subje report on completion of the inquiry.

he closure of the local office of the Ministry of Food at the end of food ning terminated an invaluable adjunct to the Department's activities, e.g., ecuring recognition by a prospective trader of the necessary hygienic irements in respect of premises and equipment *before* a food business was lished. An informal liaison between the Department and the local food operated most effectively for some years, and applicants for permits for ale of rationed foods were referred to the Department for certification of uitability of their particular premises and equipment. This was a form of approval which was useful both to the trader and the Department, and the trader fully aware at the onset of the precise nature of the requirements satisfied in respect of particular premises and equipment. This forestalled nany difficulties inherent in securing necessary alterations to premises or djustment of methods when a business has opened without such prior ultation.

iaison between the Department and the City Architect for scrutinizing s of proposed new food premises continues to the mutual benefit of both Department and the trader.

ood hawkers and their storage premises are required to be registered, and persons are recorded as being engaged in the sale of food including fruit, tables, fish, hot sausages and rolls, from carts, barrows etc., together with obile canteens and 15 mobile fried fish and chip shops. The total number torage premises registered is 144, some being used jointly by different ors. Although food hawkers are entitled to free use of the washing ties at the public conveniences in the City, very few avail themselves of ree service.

ach mobile canteen or fried fish shop is required to contain hand-washing ties with hot water, soap, towel and nail brush.

treet traders including food hawkers, are also required to be registered in dance with the Manchester Corporation Act, 1950, and the total number gistered is 570. The Corporation possess the power to refuse or revoke ration of a person on the grounds of " misconduct or other sufficient n," and following repeated convictions for offences principally concerned traffic obstruction or trading in prohibited streets, it was necessary to on 15 traders.

and ice cream control

he work undertaken to ensure the safety and purity of milk and ice cream buted in the City is directed to the fundamental need for these products kept free from all harmful bacteria and for all equipment to be maintained horoughly clean and sterile condition.

egular sampling of these foods is carried out for bacteriological and gical examinations and for chemical analysis. Similarly, there is regular ction of the dairies and other premises together with the supervision of peration of the plant and equipment and the methods of distribution.

s

ore than 3,000 visits were made to dairies and milk depots during the and the inspection and checking of the 13 pasteurizing and 6 sterilizing s was carried out at least once monthly. In no instance was it necessary stitute legal proceedings in respect of contravention of the Milk and s Regulations.

The efficiency of these plants is indicated by the high percentage (98. of satisfactory results obtained on samples of the processed milk taken at t dairies and whilst the milk was in course of delivery to hospitals, schools a the general consumer. 818 such samples were taken throughout the yea only 9 (1.1 per cent.) failed to pass the prescribed tests laid down by t Ministry, viz. the phosphatase test for efficiency of heat treatment and t ½ hr. methylene blue test for keeping quality.

City and "outside the City" milk producers

6 samples of raw milk from City milk producers and 67 samples fro "outside the City" producers coming into the City were examined by t biological test for tubercle bacilli. 2 of the City's producers' samples prov positive whilst all the samples taken from the other producers proved negati This may be attributable to the majority of these samples being from milk tuberculin tested herds. This gave a total incidence of positive samples o 2.7 per cent., as against 6.9 per cent. the previous year and 14.8 per cent. 1952. The Ministry of Agriculture and Fisheries were notified of these positi results with a request that a veterinary inspection be carried out at the far concerned. As a result, 2 cows suffering from tuberculosis of the udder we discovered and slaughtered under the Tuberculosis Order.

In addition to the above positive results, five local authorities adjoini the City notified the Department that 36 samples of the milk taken by th inspectors from farmers in their area, who were sending all their milk Manchester dairies, had been found to contain tubercle bacilli. The mi from these sources, however, was received at pasteurizing establishments the City and processed before delivery to the consumer.

74 samples of the above producers' milk were also submitted for t prescribed tests as to keeping quality and 67 (90.5 per cent.) were found to satisfactory. This compared most favourably with the results (75.6 per cen during 1953.

Milk supply to hospitals, schools and day nurseries

Pasteurized milk supplied to various hospitals, schools and day nurser in the City has been supervised and regularly sampled. The results of examinations have shown that a uniform high standard of quality and cleanlin has been maintained and on no occasion was the milk found to cont tubercle bacilli.

The raw milk supplied to the Langho Epileptic Colony and Booth Hospital from the attested herds at the Langho Colony farms has also b frequently sampled both at the farms and on arrival at Booth Hall Hospi The results of the examinations have shown a high standard of quality cleanliness and in no case has there been tuberculous infection of the milk.

General

In December, 1953, the Milk (Special Designations) (Specified Ar (No. 3) Order, 1953, was made by the Minister of Food and came into operat on the 1st January, 1954. Accordingly, on and after that date, all dairymen w retail milk within the City and surrounding districts specified in the Or must sell the milk under special designation irrespective of whether premises from which the milk is retailed are inside or outside the area any other milk which is retailed outside the specified area from those prem must also be sold under special designation.

The special designations authorized by the Milk (Special Designation) gulations, 1949, are " Pasteurized," " Sterilized," and " Tuberculin Tested." e use of the designation " Accredited " was permissible until the 30th ptember, 1954, after which date producers' licences to use this latter ignation expired and were not renewable. Accordingly, on and after October, 1954, the use of the special designation "Accredited " was not mitted and dairymen formerly retailing accredited milk in the City were uired to sell or supply pasteurized, sterilized or tuberculin tested milk. her effects of the Order which came into force on this date are that every ntainer (whether churn, can or bottle) in which pasteurized milk is trans- ted, or exposed, or offered for sale, is required to be fitted with a cap or er overlapping the lip of the container. Further, it is necessary that the teurized milk shall be put into the containers in which it is to be delivered the customer at the premises at which the milk is pasteurized. Thus, the sale pasteurized milk by can and dipper has become illegal and retailers who ght pasteurized milk in bulk containers and bottled it on their premises delivery to their customers are now required to purchase pasteurized milk bottles, cans or churns, sealed at the pasteurizer's premises and containing quantity of milk required by the consumers.

Failure to comply with the provisions of the Order is an offence under the od and Drugs (Milk, Dairies and Artificial Cream) Act, 1950, and penalties y be incurred by a dairyman who is found guilty of such an offence.

The coming into force of this Order did not affect the City to any large ent so far as the sale of ungraded milks is concerned, Manchester being of the pioneers of compulsory pasteurization, and for a considerable number years practically the whole of the City's milk supply has been either teurized or sterilized.

The few complaints which were received from the public dealt with the dition of milk bottles, not the milk itself. Each case was investigated and ropriate action taken at the dairies concerned.

No outbreak of infectious diseases implicating milk has arisen in the City ing the year.

cream

The number of premises newly registered for the manufacture and/or of ice cream during the year was 89 bringing the total number of such mises now on the register to 1,872. During the past two or three years, istrations for the sale of ice cream have been mainly of premises equipped h totally enclosed, automatic, cabinet refrigerators and selling this commodity sealed packets only. The open " old fashioned " ice tub, once so often seen shops, is now a thing of the past.

An unsatisfactory feature of the distribution of unwrapped ice cream is sale from open carts and barrows in the streets, with the accompanying of contamination of the product. The majority of street vendors, wever, have co-operated with the Department and had their vehicles enclosed far as practicable, to reduce the risk of contamination from dust and dirt m the street.

Regular visits of inspection have been made to ice cream premises, and the neral standard of cleanliness has been good. In no instance was it found cessary to institute legal proceedings in respect of dirty premises or equipment, 74 samples of ice cream were taken during the year for bacteriolog examination. 61 (82.4 per cent.) were placed in Grades 1 and 2 and w therefore, satisfactory. 5 (6.8 per cent.) came into Grade 3 which is f satisfactory, whilst 8 (10.8 per cent.) fell into the lowest grade, Grad Thorough investigation was made at the factories from which the Grades 3 a samples came and repeat samples of the ice cream taken until Grade 1 sam were obtained in each case.

There have been no cases of infectious disease reported to the Departr during the year which could be traced to ice cream consumption, nor has complaint regarding ice cream been received from the public.

Milk (Special Designation) Regulations, 1949

LICENCES ISSUED DURING THE YEAR

Dealer's licence to use the designation:

"Pasteurized"—

(A) Pasteurizing establishments .. ..

(B) Other dairies and bottled milk shops.. 1

"Sterilized"—

(A) Sterilizing establishments .. ..

(B) Other dairies and bottled milk shops.. 1

"Tuberculin tested"—

Dairies and bottled milk shops 1

Supplementary licences to use the designation:

Pasteurized .. ..

Sterilized .. ..

Tuberculin tested .. ..

Place of collection of sample	Bacteriological, etc., examination Official test (sample to pass a phosphatase test and ½-hour methylene blue test)					Biological examination for presence of tubercle bacilli				
	No. of samples examined	Satisfactory		Unsatisfactory		No. of samples examined	Positive		Negative	
		No.	Percentage	No.	Percentage		No.	Percentage	No.	Percentage
Pasteurizing plant at dairy	148	148	100.0	—	—	5	—	—	5	100.0
Hospitals	128	127	99.2	1	0.8	122	—	—	122	100.0
Schools and day nurseries	150	148	98.7	2*	1.3	143	—	—	143	100.0
On road during distribution ..	392	386	98.5	6	1.5	6	—	—	6	100.0
Totals	818	809	98.9	9	1.1	276	—	—	276	100.0

* Both these unsatisfactory samples were taken from a dairyman whose premises are situate outside the City.

(B) RAW UNTREATED MILK (TUBERCULIN TESTED AND ACCREDITED)

Place of collection of sample	Bacteriological examination Official test (sample to pass a methylene blue test)					Biological examination for presence of tubercle bacilli				
	No. of samples examined	Satisfactory		Unsatisfactory		No. of samples examined	Positive		Negative	
		No.	Percentage	No.	Percentage		No.	Percentage	No.	Percentage
City farms	5	5	100.0	—	—	6	2	33.3	4	66.7
Corporation farms	14	14	100.0	—	—	14	—	—	14	100.0
Hospitals (supplied by Corporation farms)	5	5	100.0	—	—	7	—	—	7	100.0
On road during distribution.. ..	2	2	100.0	—	—	9	—	—	9	100.0
Individual country farms (on arrival at City dairies)	48	41	85.4	7	14.6	37	—	—	37	100.0
Totals	74	67	90.5	7	9.5	73	2	2.7	71	97.3

In addition to the above samples, 299 samples of milk were taken at hospitals, schools and day nurseries in the City and submitted for chemical analysis. The results of the analysis showed that all the samples came up to the legal standard.

Food and drugs adulteration

The administration of the Acts, Orders and Regulations gover food and drugs adulteration has been maintained throughout the year, and three sampling officers engaged gave close attention to the basic foods forr the dietary of the average family when obtaining samples of the foods and d sold within the City.

During the year rationing ceased and there was a further increase in growing variety of foods offered for sale to the public. The samples obtai however, did not reveal any material increase in adulteration, or labe errors or the use of excessive preservatives. Similarly, the results of anal following the removal of controls did not reveal evidence of deteriora in the quality of the foods sold.

As many new varieties and types of foods as was practicable were submi to the Public Analyst for comparison with existing standards. Whilst provisions of the Acts and Regulations include statutory standards for nume foods, those of other foods are not so determined, and on occasion the stan applicable to the article concerned may be fixed by a decision of a magis following the institution of proceedings.

With prepacked foods, other than those exempted by the Labelling O a quantitative standard is declared on the label or packet. The sale of foo this manner gives an obvious advantage to the consumer and trader, as ingredients must be clearly stated in quantitative order. Prepacking conti to increase and is the most hygienic method of handling many foods.

There were no alterations in the general law in connection with the labe of prepacked food.

The law regarding food standards was amended, however, by the Standards (Margarine) Order, 1954, which prescribed a standard as res vitamins A and D to be contained in margarine. This applies only to the sale of home-produced and imported margarine. In addition the stan specified in the code of practice for canned soups in the Report o Advertising, Labelling and Composition of Food, 1949, was amended to p the inclusion of butter fat for use in connection with cream soup.

Samples

The number of samples of food and drugs obtained by the sampling of in the year totalled 3,301 of which 1,291 were of milk, including 12 " a to cow " samples. In addition 299 informal samples of milk, 11 info samples of ice cream and 6 informal samples of ice lolly ingredients submitted by the milk control inspectors.

Of the 462 milk samples purchased from retailers, 2 were below presumptive legal standard, one contained a trace of added water, the was deficient in fat. The dairy companies concerned were cautioned: fu samples were satisfactory.

812 samples of milk were taken from farmers' consignments on arri dairies in the City and of these 176 proved on analysis to be belov prescribed standard. 26 of the sub-standard samples were deficient i but as the average fat content of the respective consignments of which formed part exceeded the standard prescribed by the Sale of Milk Regula 1939, no further action was taken.

;autions were sent to 27 farmers regarding 78 samples which were below tandards prescribed in the Regulations, and the remainder of the unsatisry samples were dealt with by sampling further consignments from the sources, which in each case proved to be satisfactory. Legal proceedings instituted against 4 farmers in respect of 20 samples which proved to be :antially adulterated and fines and costs amounting to £44 11s. 2d. were sed.

,010 samples of foods (other than milk) and drugs were purchased or taken submitted to the Public Analyst; of these, 1,318 were formal samples and vere informal samples. Informal samples are obtained chiefly for exploration purposes and without disclosure of intention to the vendor. Formal ling may follow.

ılarities

mong the unsatisfactory samples dealt with were the following:—

ontraventions of the Food Standard Orders occurred in three samples sh paste and the manufacturer was prosecuted and fined £5. Minor encies were found in samples of soda water and ginger beer and the facturers were cautioned. A liquid described as a fruit juice was deemed a soft drink improperly described. As a soft drink it complied with the Standards Soft Drinks Order, 1953, for a soft drink for consumption out dilution. The manufacturer was cautioned and altered the bottles abels to conform with the Order.

mples of shrimps found on analysis to contain boric acid contravened Public Health (Preservative in Food) Regulations, 1925–1953, and the rter was cautioned. In addition the medical officers of health of the ports try were informed of the circumstances.

he following prepacked foods contravened the Labelling of Food Order, i.e. the ingredients were not stated on the label or were not in the itative order:— cereal soup mixture, Christmas pudding and pickles. manufacturers or packers were cautioned and the commodities re-labelled.

ollowing a private sample of gin submitted for analysis and reported to in 36 per cent. of added water, a formal sample of gin obtained at the ed premises concerned was found to be genuine. A formal sample of urchased at a licensed restaurant contained 2.9 per cent. of added water. irm was cautioned. Further samples purchased at the same establishment satisfactory.

fter analysis of a formal sample of gin, the Public Analyst was of the on that an associated advertisement was wrong. After correspondence rm concerned intimated that use of the particular advertisement had ceased.

sample of processed cheese analysed was found to be deficient in fat and mporter was cautioned. Minor deficiencies occurred in samples of ded beef suet, vermicelli and tapioca. A further formal sample of shredded suet was purchased and found satisfactory. The retailers of the vermicelli apioca had incorrectly described the articles and were cautioned, which ed in proper descriptions being applied.

Extraneous matter was found in a number of samples of food. Each had been submitted by members of the public. Cautionary letters were s to the manufacturer or packer and when necessary information was forwar to the medical officer of health in whose district the factory was situate. connection with samples of pickles (fermenting), dried beans and peas (dama by insects), and dried fruits (beetles and larvae present), the remaining st concerned were examined and withdrawn from sale.

One sample of dried fruit found to be deficient in weight was referre the Weights and Measures Department, and a sample of canned orange j and a sample of breakfast oats found to be unfit for human consumption v reported to the Markets Department for action under the unsound f clauses.

Irregularities contravening the Acts were found in samples of ammoni tincture of quinine, Easton's syrup, compound linctus of squill, olive syrup of squills and zinc and castor oil ointment. The irregularities bein a minor character were dealt with by cautions to the vendors. A sampl infants' cordial found to contain morphine was dealt with by informing Pharmaceutical Society of the circumstances. The sale of the commo ceased and further samples obtained, when it was again on sale, revealed morphine was not being used as an ingredient.

Sausage

There are now no prescribed legal standards for the meat content of and beef sausage. Twenty samples were purchased during the year and in case the meat content was satisfactory when compared with the stand formerly applicable under a Ministry of Food Order.

Public Health Condensed Milk Regulations, 1923—1953
Public Health Dried Milk Regulations, 1923—1948

36 samples of condensed and dried milks were submitted to the P Analyst for examination and the quality and labelling requirements were f to be in accordance with the regulations.

Butter and margarine factories—wholesale premises

The number of registered premises is 100 and inspections made of establishment found that the requirements of the Department were sat in respect of the absence of adulterants and the structural arrangemen premises where both butter and margarine are stored.

Food Standards (Ice Cream) Order 1953

There has been no change in the minimum standards of compositi ice cream, viz. not less than 5 per cent. fat, 10 per cent. sugar and 7½ per milk solids other than fat (an alternative standard is permitted for ice c containing fruit, fruit pulp, or fruit puree and for " Parev " (kosher) ic

23 samples of ice cream submitted for analysis complied with prescribed standards.

The samples of foods and drugs which failed to meet the requireme the Acts, Regulations and Orders are detailed in the following t statement:—

Informal samples							Formal samples									
													Legal proceedings			
Adulterated or unsatisfactory	Cautioned	Formal samples obtained	Formal samples unobtainable	Action taken under the Unsound Food Clauses	Referred for action to appropriate authority (*a*)	Article	Adulterated or unsatisfactory	Cautioned	Legal proceedings ordered	Irregularity deemed too slight for further action	Referred for action to appropriate authority (*a*)	Pending	Summoned	Fined	Amount of fines	Amount of costs
															£ s. d.	£ s. d.
64	*	—	—	—	—	Milk	120	100†	20	—	—	—	20	20	26 10 0	18 1 2
1	—	1	—	—	—	Alcoholic liquids	2	1	—	—	—	1	—	—	—	—
3	3	—	—	—	2	Bread	—	—	—	—	—	—	—	—	—	—
1	1	—	—	—	—	Cakes, sweet	—	—	—	—	—	—	—	—	—	—
1	—	—	—	1	—	Canned orange juice	—	—	—	—	—	—	—	—	—	—
1	1	—	—	—	—	Cheese	—	—	—	—	—	—	—	—	—	—
1	1	—	—	—	—	Christmas pudding	—	—	—	—	—	—	—	—	—	—
1	—	—	—	—	1	Dried fruits	1	1	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Dried pulses	2	2	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Fish paste	3	—	1	—	—	—	1	1	5 0 0	—
1	1	—	—	—	—	Flavouring	—	—	—	—	—	—	—	—	—	—
2	1	—	—	—	—	Fruit juice	—	—	—	—	—	—	—	—	—	—
1	—	—	—	—	1	Meat products	—	—	—	—	—	—	—	—	—	—
3	2	—	—	—	—	Mineral waters	—	—	—	—	—	—	—	—	—	—
1	—	—	—	1	1	Oats (breakfast)	—	—	—	—	—	—	—	—	—	—
1	1	—	—	—	—	Pickles	1	1	—	—	—	—	—	—	—	—
2	—	2	—	—	—	Shrimps	2	1	—	—	1	—	—	—	—	—
1	1	—	—	—	—	Soups	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Suet, shredded	1	—	—	1	—	—	—	—	—	—
—	—	—	—	—	—	Tapioca	1	1	—	—	—	—	—	—	—	—
1	1	—	—	—	—	Vermicelli	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Ammoniated tincture of quinine	1	1	—	—	—	—	—	—	—	—
1	1	—	—	—	—	Easton's syrup	—	—	—	—	—	—	—	—	—	—
1	—	1	—	—	—	Compound linctus of squill	1	1	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Infants' cordial	1	—	—	—	1	—	—	—	—	—
1	1	—	—	—	—	Oil, olive	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Syrup of squills	1	1	—	—	—	—	—	—	—	—
1	—	—	1	—	—	Zinc and castor oil ointment	—	—	—	—	—	—	—	—	—	—

* Followed by formal samples where necessary.

† Cautioned or samples repeated.

(*a*) Board of Customs and Excise.
Other local authorities.
Pharmaceutical Society.
Markets Department.
Weights and Measures Department.

REPORT FROM MARKETS DEPARTMENT ON SUPERVISIC OF MEAT AND OTHER FOODS

The Medical Officer of Health is indebted to the General Manager c Markets Department for the following particulars relating to the opera of the Department during the year ended 31st March, 1954.

The numbers of animals slaughtered at the City Abattoir during c years are shown in Table A; Table B shows the total condemnations i City; and Table C the total weight of meat condemned at the City Ab and Wholesale Meat Market.

The bulk of the meat, fish and fruit which is condemned is found unfit for food on arrival at the markets, railway stations, and wholesale h An efficient system of inspection at the centre of distribution lessens th of diseased meat, etc., being exposed for sale in retail shops.

The staff of inspectors comprises 1 chief veterinary inspector, 3 as veterinary inspectors and 10 meat, fish, etc., inspectors.

TABLE A

Animals slaughtered at the City Abattoir during certain years

Year ended 31st March	Cattle	Sheep and lambs	Calves	Pigs
1945	42,927	172,276	18,305	1,477
1946	61,387	168,152	34,881	1,705
1947	64,061	233,675	46,701	1,385
1948	75,051	179,350	34,246	752
1949	58,645	208,725	39,447	2,659
1950	72,449	209,048	44,170	3,058
1951	80,852	216,399	52,259	6,403
1952	97,467	194,143	44,755	7,718
1953	68,400	232,182	31,720	17,466
1954	65,303	230,662	27,425	31,978

TABLE B

Total condemnation of various foodstuffs during 1945-54

of food	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954
s)	697	774¼	821	852½	808	978	954¾	1,113½	775	690
)	183	168½	190	387¼	284	316¾	160	79¼	57½	55¾
s)	28¾	10¼	26½	144½	80	136	83¾	91½	81	57¾
s (tons) ..	366½	206	127	326½	131¾	162½	109½	61	23	94½
nber) ..	120	718	384	946	40	640	1,614	900	2,198	4,844
ad) ..	728	1,079	223	156	524	1,835	675	184	658	704
head) ..	8,429	3,855	5,129	2,812	6,465	15,043	7,419	5,048	4,130	6,712
head) ..	6,704	1,079	3,363	2,217	1,731	11,040	12,610	17,372	9,587	9,925

TABLE C

Meat condemned at the City Abattoir and Wholesale Meat Market

Particulars	Year ended 31st March, 1953	Year ended 31st March, 1954
eight of meat condemned at the City Abattoir d Wholesale Meat Market	Tons 746½	Tons 662¼
h the weight of dressed meat consigned from ces other than the city was	14¾	23
d in which were imported offals amounting to ..	364 lbs.	547 lbs.

Unwholesome food condemned

Kind of food	Year ended	
	31st March, 1953	31st Marc 1954
MEAT :—	lbs.	lbs.
Beef	1,595,506	1,384,73
Mutton	20,997	18,13
Veal	27,580	23,0
Horseflesh	—	—
Pork	89,934	118,8
Reindeer	15	—
Whalemeat	55	—
Venison	53	2
Imported offal	364	5
Goatflesh	1,335	—
	1,735,839 = 775 tons	1,545,6 = 690
FISH :—	lbs.	lbs.
Fish	122,345	119,7
Shellfish	6,472	5,0
	128,817 = 57½ tons	124,7 = 55¾
	head	he
GAME	658	7
POULTRY	4,130	6,7
RABBITS	9,587	9,9
	lbs.	lbs.
FRUIT	181,378 = 81 tons	129,5 = 57¾
VEGETABLES	51,450 = 23 tons	211,7 = 94½
MISCELLANEOUS :—	No.	No.
Eggs	2,198	4,8
	lbs.	lbs.
Evaporated, condensed and other canned milks	6,780	10,3
Sundry provisions	96,151	71,8

pproximately 950 tons of unwholesome food were condemned under all ıgs by the inspectors of the Markets Department during the year ended March, 1954. With the exception of 14½ tons, this total comprised the ;ate condemnations arising from routine duty examinations.

ıe 14½ tons condemned arose out of 343 special inspections involving ons of foodstuffs, classified as follows:—

	Tons
ɔund to be fit for retail trade	202½
ɔund usable for manufacturing for human food	7
ɔund usable for animal feeding stuffs	78¾
ɔund usable for commercial or industrial purposes	2
ɔndemned as unfit for any purpose	14½
	304¾

ndemned food is handed over to the Cleansing Department of the ration for processing for commercial or industrial purposes, or for ction by fire. A small portion of the total condemned as unfit for human nption is found usable for animal feeding stuffs and for commercial and ial purposes.

th the exception of the following, which were seized while deposited or d for sale, the quantities given in the preceding tables were surrendered eing condemned by inspectors of the Department:—

Kind of food	Year ended	
	31st March, 1953	**31st March, 1954**
	Head	Head
ry	1	1
	lbs.	lbs.
	Nil	69½
ry provisions	1½	Nil

E.—The term "surrendered" includes cases in which inspectors have discovered some food in the course of their duty, but in which, owing to the salesman's acceptance spector's decision, it has been deemed unnecessary to obtain a magistrate's order prior ıction.

Carcases inspected and condemned—year ended December, 1954

	Cattle excluding cows	Cows	Calves	Sheep and lambs	Pigs
Number killed and inspected—					
At the City Abattoir	38,601	30,416	26,986	468,874	44,224
Brought into the City after killing and inspected	22,727		5,857	34,431	62,357
All *diseases except tuberculosis*—					
Whole carcases condemned:—					
At the City Abattoir	24		198	268	257
Brought into the City after killing	7		1	1	10
Carcases of which some part or organ was condemned:—					
At the City Abattoir	4,160		50	690	3,103
Brought into the City after killing	247*		—	82*	112*
Percentage of the number inspected affected with disease other than tuberculosis:—					
At the City Abattoir	6.1		0.9	0.2	7.6
Brought into the City after killing	1.1*		Negligible	0.2*	0.2*
Tuberculosis only—					
Whole carcases condemned:—					
At the City Abattoir	42	369	34	—	63
Brought into the City after killing	1		—	—	1
Carcases of which some part or organ was condemned:—					
At the City Abattoir	863	5,384	6	—	1,670
Brought into the City after killing	27		—	—	7
Percentage of the number inspected affected with tuberculosis:—					
At the City Abattoir	2.3	18.9	0.1	—	3.9
Brought into the City after killing	0.1		—	—	Negligible

* Includes condemnations due to decomposition which accounts for a large part of the percentages.

NOTE.—All carcases brought into the City during the first half of 1954 were inspected at the place of slaughter under Control in operation

SMOKE ABATEMENT

The final report of the Committee on Air Pollution under the Chairmanship Sir Hugh Beaver was published in November. Its findings and recommenda- ns, together with the official reception accorded to it, are such that it is sonable for local authorities to expect that they will soon have the portunity to make much more progress in combating the " social and nomic evil " of smoke pollution of the atmosphere. It rejects the defeatism ny who seemingly would discount the value of combating smoke until there practicable means of eliminating gaseous pollution, e.g., sulphur dioxide, as tinct from the more visible pollution of the atmosphere by smoke, including .

In the course of its investigation the Committee attended numerous areas luding Manchester and visited the Clayton and Miles Platting districts and central smokeless zone of the City.

The Report, complete with appendices is a comprehensive survey of the ure and extent of the smoke problem, and expresses the basic belief that, declared national policy, air pollution should no longer be tolerated and ds to be combated with conviction and vigour. It recognizes that this not be achieved without the insistent demand and support of public opinion, h individual and corporate, and will require far reaching legislation at costs sacrifices far less than the national loss in allowing the evil to continue.

Logically its findings relate to both industrial and domestic smoke, the er being recommended for legislative control for the first time, apart from ting local Acts dealing with smokeless zones. Other recommendations ld enact general legislation for smokeless zones, " smoke control areas " a time-density standard for " dark smoke " emissions elsewhere, whilst the ssity of ensuring adequate supplies of smokeless fuels and suitable domestic ing appliances is recognized as an essential part of a clean air policy. ncial implications are acknowledged in recommendations on the making ants by local authorities and the Exchequer toward the cost of conversions house-owners in smokeless zones and smoke control areas.

n general the Committee's recommendations endorse Manchester's long ding policy to secure clean air, but on one important administrative issue a ge is suggested which doubtless will receive special consideration by the Council and other local authorities. The enforcement of the prohibition ark smoke, grit and dust from " scheduled processes " including some esses at present specified in the Public Health Act, 1936, Section 109 (1), d become the responsibility of the Alkali Inspectorate of the Ministry of sing and Local Government.

or this purpose, the provisions of the Alkali etc. Works (Regulation) Act, , would be extended to include in an initial list, metallurgical works, ricity power stations, gas works, coke works, ceramic works and lime works: ist would be subject to periodical review for additions or deletions.

his suggestion is a deviation from the otherwise complete acceptance of xisting position of local authorities continuing to be responsible for the cement of smoke legislation. The Committee express the view that the fer is necessary because the prevention of dark smoke, grit and dust ions from those processes presents certain technical problems which they der could best be resolved by enlargement and strengthening of the Alkali ctorate. At least some authorities who have long laboured with a measure ccess, limited though it has been, in the application of the existing general tion with its many weaknesses (which the Committee recognize and would have remedied) and perhaps more especially authorities with local powe may look askance at this suggested loss of control of these local sources pollution to a central inspectorate. Manchester with its resources experience cannot welcome any such change.

A further difference between the views of Manchester and the Report in the rejection of the obligatory principle in the prior approval of fuel burn plant by a local authority and reliance on the purely voluntary measure exc in relation to the "scheduled processes" which it is suggested that the Al Inspectorate should administer.

Nevertheless, whilst certain items will arouse controversy, the gen proposals, if implemented by Parliament and properly enforced, must welcomed as a practical approach to securing a great reduction in atmosph pollution.

In Manchester, there has been continued successful activity in sm abatement. Further areas adjoining the central area were surveyed, following the necessary orders made by the Corporation, and approved by Minister of Housing and Local Government, a total of three marginal extensi to the smokeless central area will be enforced from the 1st May, 1955. addition, all future clearance areas will become smokeless zones from the such areas are cleared of existing housing, so that all newly erected build shall be smokeless. This matter is dealt with in more detail in a subseq part of this report.

Public interest in this aspect of environmental hygiene has been stimul by the success of the central smokeless area, enthusiastically received in national and local press. Enquiries have been received from nume authorities both in this country and abroad, requesting information on met of establishing such zones, and on particular problems in smoke abatem The general increase in the work undertaken by the inspectors is indicate 3,167 visits being made as compared with 2,528 in the previous year.

Apart from local legislation dealing with smokeless zones and the requiren that all new furnace installations must be smokeless as far as is practic legal action against smoke emissions from industrial furnaces can only be t when such emissions are of such density and duration as to cause a sm nuisance as defined in the Public Health Act, 1936. Legal sanctions necessary at least to provide some deterrent to the indifferent. Neverth the general character of smoke abatement duties in Manchester continu change, with increasing emphasis on smoke prevention, from the practic the earlier part of the century of reporting nuisances for punitive action t more rewarding work of securing the co-operation of the various interes prevent the nuisances and their associated inefficiency.

Industrialists acknowledge the assistance that they receive from inspectors, who sometimes are specially requested to visit when un problems arise. In this connection their experience is invaluable whe provision of mechanical stokers is being considered, so as to secure pr consideration of an appliance in relation to particular conditions. In cases, the inspectors act as a liaison between two manufacturers so that visit be arranged to inspect recommended plant whilst it is operating under wo conditions.

The principal cause of undue smoke emission is still found to be d unskilled firing. Although special classes for stokers have been hel Manchester for over 40 years, and generally have been well attended, the lo skilled firemen into other employment continues. It would appear that ter will not be remedied until furnace firing is recognised as skilled work, suitable personnel attracted by improvement in working conditions. The lth Committee has recommended to the City Council that all Corporation loyees who are engaged on boiler firing or maintenance, should receive extra to encourage proficiency, shown by attending courses and securing ificates in boiler plant management.

t is comparatively rare for unsuitable fuel to be the sole cause of smoke ance ; generally it is associated with lack of experience on the part of the er on how to utilize such fuel to the best advantage. At the same time ust be recognized that some types of mechanical stoker are very selective gard to the type of fuel which can be fired efficiently. In one such instance, ious and continuing nuisance occurred due wholly to the unsuitable grading he fuel supplied.

o mechanical device is free from the possibility of failure, and when this rs on large scale steam-raising plant, production problems may be mpanied by serious difficulties in reducing smoke nuisance. This problem e at one plant where the motor providing mechanical draught and grit stment was burned out, and caused the engineer to contend with smoke and troubles whilst endeavouring to maintain adequate and uniform steam sure to the chemical process plant.

or aesthetic, as well as for economic reasons, it is becoming the practice smaller firms to construct relatively low chimneys, and the report of the er Committee draws attention to the undesirability of low-level emission of hur dioxide from this cause. Where the load subsequently increases, hanical draught is provided, and unskilled control of this draught, along fuel containing a high percentage of " fines " may cause a serious grit sion. Such a case occurred during the year, the nuisance being intensified he low height of the chimney.

ollowing representations made by the Corporation against continuing ke nuisances from Crown property, an undertaking has been given that large reconstruction work will be commenced at several of the premises erned.

has been noted by the inspectors that an increasing interest is being ayed in the advantages of oil fuel, and one coal fired plant has been erted to oil firing during the year. Many coal fired metallurgical furnaces been superseded by oil firing during the past few years with consequent tion in smoke emission.

he following statement relates to the work of the smoke inspectors under rovisions of the Public Health Act, 1936 :—

Timed observations taken	666
Black smoke, two minutes and over in half-hour periods	76
Smoke other than black and causing nuisance	15
Black smoke over two minutes on Crown premises	2
Black smoke under two minutes	300
Smoke other than black not in such a quantity as to be a nuisance	22
Total amount of black smoke observed in minutes	624
Average amount of black smoke observed (in minutes) per observation revealing black smoke	1·65
Total amount of smoke other than black, in minutes	253½
Average amount of smoke other than black observed (in minutes) per observation revealing smoke other than black	6·85
Complaints from all sources	182
Visits to works re smoke abatement	3,167
Premises where inspectors recommended plant to be altered, improved or repaired	62

Premises where plant was found to have been altered, etc., as a result of inspector's recommendation	
Cases reported to Committee	
Cases cautioned or excused	
Statutory notices served—black smoke	
Statutory notices served—other than black	
Prosecutions for smoke nuisances, penalties imposed	
Amount of penalties and costs	
Statutory notices expiring without further action	
Approximate number of industrial chimneys—including exempted chimneys	1
Cases reported to Committee—causes of emissions:—	
Bad firing	
Unsuitable fuel	
Bad firing and defect in plant	
Defects in plant	
Overloading plant	
Insufficient boiler plant	

Prior approval of the installation of furnaces

Existing national legislation, by being merely punitive, and permitting ac to be taken only after a smoke nuisance has occurred, can have little effec reducing the total smoke emission into the atmosphere. A more log approach is that of the control of furnace installations so as to prevent, as fa is practicable, such unnecessary smoke emissions. Accordingly, in 1946, Manchester Corporation pioneered legislation, so far as this country is cerned, by obtaining powers to ensure that all new furnaces, with a exceptions, should be smokeless as far as is practicable. This Manche Corporation Act, 1946, Section 36, was later amended by the Manche Corporation Act, 1950, Section 42, so as to increase the scope of the meas A Code of Requirements has been formulated, applicable to steam-raising p and all new furnaces for such plant, if coal fired, must be fed by mechai means.

Notification of new installations is not compulsory, but the Departr becomes aware of such schemes by enquiries from consultants, archit furnace and stoker manufacturers, and by perusal of plans submitted to the Architect, in which boilers, furnaces, flues or chimneys are shown. In addit the smoke inspectors become cognizant of intended alterations or addition plant during their routine visits.

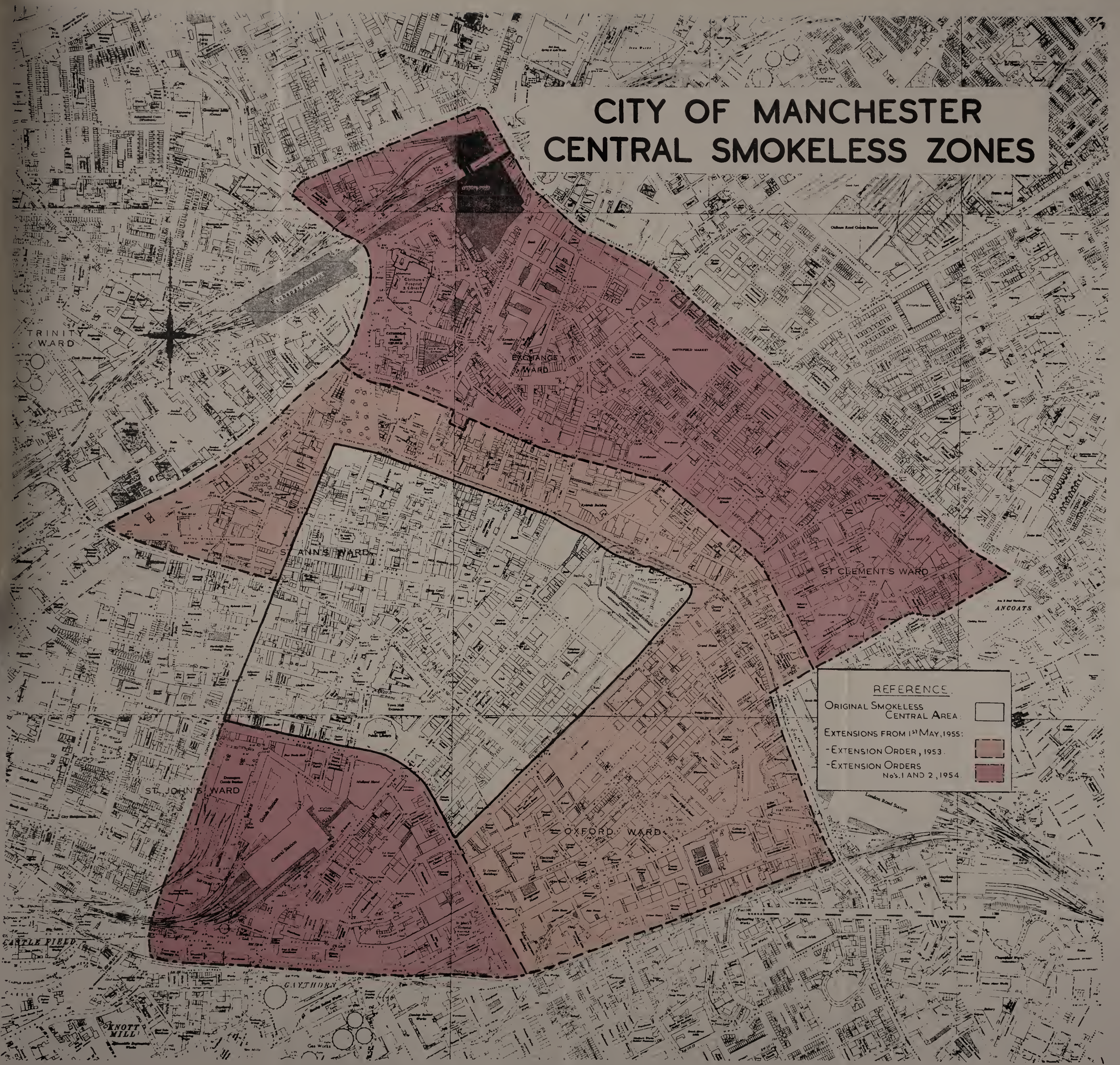
During the year, 11 formal notices of approval were issued, and 23 submitted to the City Architect were scrutinized, and the architects consultants advised on the most suitable methods of complying with Corporation requirements. No large-scale schemes were proposed, proposed plant mainly comprising coke, gas and oil fired furnaces.

Smokeless zones

Manchester Corporation Act, 1946, *Section* 35

The powers of the above Section enable the Corporation to de smokeless zones in any part of the municipal area, subject to the approval o Minister of Housing and Local Government.

The central area of the City, extending over 104 acres, was declar smokeless zone as from May 1st, 1952. The result was so spectacular du its initial winter period, 1952–53, that an adjoining area was surveyed ear 1953, and this first proposed extension was approved by the City Council, the declaratory Order was submitted to the Minister of Housing and L Government. Public approval of the central smokeless zone continued du the second year of its establishment, and consequently, without waitin approval for the first marginal extension, two further contiguous areas



Note: the Smokeless Central Area and marginal extensions are contained within St. Peter's ward of the City

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eyed during 1954. The necessary orders were made by the Corporation, the three marginal extensions were approved by the Minister during the . The orders will become operative on the 1st May, 1955. This date has ı selected in order to give adequate time for the necessary alterations to be ied out when heating demands are slight and minimize any risk of nvenience to the occupiers in the zones.

'articulars of these marginal extensions are as follows :—

1 *marginal extension*

This is an area of approximately 130 acres forming a marginal extension of e central area " and bounded by Oxford Street (from Portland Street), the uct of the Manchester, South Junction and Altrincham Railway, London d, Ducie Street, Dale Street, Church Street, Cannon Street, Bank Buildings, donald's Lane, Lower Cannon Street, Cannon Street, Cateaton Street, oria Bridge, River Irwell, Albert Bridge, Bridge Street West, Bridge Street, nsgate, St. Mary's Gate, Market Street, Piccadilly, Portland Street.

The survey has revealed that within the 516 separate premises in the area e are 6,694 appliances in use for heating, cooking, hot water or steam supply. of the appliances are in premises used as dwellings. Of the 6,694 appliances se, 5,115 are operated smokelessly, being gas, oil or electric appliances, 431 solid smokeless fuel but are not smokeless during lighting up and the iining 1,148 appliances using coal are not smokeless.

(i) Number of appliances in use			6,694
(ii) Number operated smokelessly			5,115
(iii) Number not operated smokelessly :—			
Open grates	990		
Heating—Hot water or steam supply boilers	43		
Heating stoves	28		
Kitchen ranges	87		
		1,148	
(iv) Number operated smokelessly except during lighting up :—			
Open grates	12		
Heating—Hot water or steam supply boilers	313		
Heating stoves	104		
Kitchen ranges	2		
		431	
			1,579

hus, if the prohibition of smoke is extended to this area, 1,579 appliances be affected and the following information is supplied about these ances :—

Open grates (1,002):

All the grates are capable of burning semi-coke such as coalite and the use of gas pokers would overcome the emission of smoke during lighting of the fires. Alternatively, some occupiers may prefer to install gas or electric heating appliances.

Boilers for heating, hot water or steam supply (356):

313 of these boilers are using coke as a fuel and are operated smokelessly except during ighting up. The provision of a gas lighting torch would secure the necessary smokeless operation during the ignition of the coke.

The remaining 43 boilers are using coal with mechanical stoking to 41 boilers and hand-firing to 2. Occasional emissions of smoke of varying densities occur from these ppliances and in order to secure smokeless operation reconstruction or conversion of the plant may become necessary.

Heating stoves (132):

104 of these stoves are using coke as a fuel and are operated smokelessly except during ighting up ; the remaining 28 are burning coal but are capable of burning coke. The ubstitution of coke for coal in these 28 stoves and the use of gas pokers for ignition with ll the stoves could secure smokeless operation.

Kitchen ranges (89):

2 of the ranges are using coke as a fuel and in 83 other ranges solid smokeless could be used but in each case gas ignition would be necessary to secure smokeless opera In the remaining 4 ranges bituminous coal is being used and replacement by smok fuel appliances would be necessary.

It is estimated that in the area the average weekly consumption of bitumin coal is 310 tons, anthracite 3 tons, coke 340 tons and oil 22 tons.

No. 2 marginal extension

This is an area of approximately 53 acres and bounded by Peter Street f Deansgate, Oxford Street, along the Manchester, South Junction and Altrincl Railway curtilage (Oxford Street to Whitworth Street West), Deansgat Peter Street.

This area includes 160 separate premises in which 1,208 appliances are in for heating, cooking, hot water or steam supply and trade processes. Si the premises are dwellings containing 11 appliances.

Of the 1,208 appliances in use, 798 are operated smokelessly, being gas, electric appliances, or appliances using smokeless fuels with gas ignition ; appliances use solid smokeless fuel but are not smokeless during lighting up of the remaining 280 appliances which are also not smokeless in operat 279 use coal and an annealing furnace uses a mixture of coke and wood.

(i) Number of appliances in use		
(ii) Number operated smokelessly		
(iii) Number not operated smokelessly :—		
Open grates	224	
Heating—Hot water or steam supply boilers	6	
Metallurgical furnace (Annealing)	1	
Heating stoves	30	
Kitchen ranges	17	
Incinerators	2	
		280
(iv) Number operated smokelessly except during lighting up:—		
Open grates	12	
Heating—Hot water or steam supply boilers	77	
Heating stoves	36	
Kitchen ranges	5	
		130

Thus, if the prohibition of smoke is extended to this area, 410 appli will be affected and the following information is supplied about appliances :—

Open grates (236):

All the grates are capable of burning semi-coke such as coalite and the use pokers would overcome the emission of smoke during the lighting of fires. Altern some occupiers may prefer to install gas or electric heating appliances.

Boilers for heating, hot water or steam supply (83):

77 of these boilers are using coke as a fuel and are operated smokelessly, except lighting up. The provision of a gas lighting torch would secure the necessary sm operation during the ignition period.

The remaining 6 boilers are using coal with mechanical stoking of 4 and han of 2 boilers. One of these is almost smokeless under normal conditions. The 5 boilers—3 Economic and 2 Cornish—could not meet the peak winter load with co and in order to secure smokeless operation, reconstruction or conversion of th may become necessary.

Metallurgical furnace (1):

This is an annealing furnace hand fired with coke and wood and cannot be op smokelessly. For that purpose a complete new gas fired unit with instrume would be necessary.

Heating stoves (66):

36 of these stoves are using anthracite coal or coke as a fuel and are operated smokelessly except during lighting up ; the remaining 30 are burning bituminous coal but are capable of burning coke. The substitution of coke for coal in these 30 stoves and the use of gas pokers for ignition with all the stoves could secure smokeless operation.

Kitchen ranges (22):

5 of the ranges are using coke as a fuel and are operated smokelessly except during lighting up. The remaining 17 cases use bituminous coal and are capable of using coke. Gas ignition would be necessary in all cases.

Incinerators (2):

One is a boiler used as an incinerator at a hospital and cannot be completely smokeless and should be replaced by a gas or coke fired incinerator. The other which is at a hotel also cannot be operated smokelessly and could be discontinued on arrangements being made for the waste matter to be collected for disposal by the Corporation Cleansing Department.

t is estimated that the average weekly consumption of bituminous coal is ons, anthracite 5 tons, coke 100 tons and oil ½ ton.

3 *marginal extension*

This is an area of approximately 125 acres and bounded by Ducie Street, n Dale Street, Gt. Ancoats Street, Swan Street, Miller Street, Corporation et, Cheetham Hill Road, New Bridge Street, to the River Irwell, along the nchester boundary to Victoria Bridge, Cateaton Street, Cannon Street, er Cannon Street, Macdonald's Lane, Bank Buildings, Cannon Street, rch Street, Dale Street to Ducie Street.

This area includes 690 separate premises in which 6,133 appliances are in for heating, cooking, hot water or steam supply and trade processes. 84 of appliances are in 31 premises used as dwellings.

Of the 6,133 appliances in use, 4,987 are operated smokelessly, being gas, electric appliances, or appliances using smokeless fuels with gas ignition ; appliances use solid smokeless fuel but are not smokeless during lighting up of the remaining 806 appliances, 788 use coal and 18 wood sawdust or d shavings.

(i) Number of appliances in use ..			6,133
(ii) Number operated smokelessly..			4,987
(iii) Number not operated smokelessly :—			
Open grates	671		
Heating—Hot water or steam supply boilers	26		
Trade processes	12		
Heating stoves	39		
Kitchen ranges	57		
Incinerator	1		
		806	
(iv) Number operated smokelessly except during lighting up :—			
Open grates	22		
Heating—Hot water or steam supply boilers	205		
Trade processes	1		
Heating stoves	110		
Kitchen ranges	2		
		340	
			1,146

hus, if the prohibition of smoke is extended to this area, 1,146 appliances be affected and the following information is supplied about these iances :—

Open grates (693):

All the grates are capable of burning semi-coke such as coalite and the use of gas pokers would overcome the emission of smoke during the lighting of fires. Alternatively, some occupiers may prefer to install gas or electric heating appliances.

Boilers for heating, hot water or steam supply (231):

205 of these boilers are using coke as a fuel and are operated smokelessly, ex during lighting up. The provision of a gas lighting torch would secure the neces smokeless operation during the ignition period.

The remaining 26 boilers are using coal with mechanical stoking to 17 and h firing to 9 boilers. Those mechanically fired are substantially smokeless under nor conditions, while the other 9 could not meet the peak winter load with coke fuel an order to secure smokeless operation, reconstruction or conversion of the plant may bec necessary.

Trade processes (13):

One, a smithy's hearth is smokelessly operated with the use of coke. The provi of a gas lighting torch would secure smokeless operation during the ignition period. other 12 are bacon smoking chambers at 4 premises from which the emission of s light smoke is unavoidable.

Heating stoves (149):

110 of these stoves are using anthracite coal or coke as a fuel and are oper smokelessly except during lighting up ; 22 are burning bituminous coal but are capabl burning coke. The substitution of coke for coal in these 22 stoves and the use of pokers for ignition with all the stoves could secure smokeless operation. The remai 17 stoves burn sawdust or wood shavings and cannot be operated smokelessly. Alte tive methods of heating would require to be provided.

Kitchen ranges (59):

2 of the ranges are using coke as a fuel and are operated smokelessly except du lighting up. The remaining 57 cases are bituminous coal and are capable of using c Gas ignition would be necessary in all cases.

Incinerators (1):

This is used for burning lino and waste refuse and cannot be smokelessly operated its use could be discontinued by arrangements being made for the removal of the t refuse.

It is estimated that the average weekly consumption of bituminous co 104 tons, anthracite 2 tons, coke 183 tons, semi-coke ½ ton, oil 41 tons sawdust and wood shavings 6 tons.

The total average weekly consumption for the three marginal extension bituminous coal 501 tons, anthracite 10 tons, coke 627 tons, semi-coke ½ t oil 63½ tons and sawdust and wood shavings 6 tons.

The Department was informed that sufficient supplies of solid smoke fuel would be available to meet the requirements of occupiers of prem within the areas and representatives of the North Western Electricity Board North Western Gas Board indicated that the increased demand for electri and gas or for the supply and fitting of the necessary appliances could satisfied.

At a post-war housing estate at Wythenshawe, the Corporatio endeavouring to induce the occupiers to agree to the formation of a volun smokeless zone. These houses are all provided with approved applia capable of burning smokeless fuel, and a gas supply is provided for gas igni if required by the occupier. The Housing Department would provide appr safety connections for gas pokers on the tenants deciding in favour of form a smokeless zone. It is regretted that as yet there has been no universal dem from the majority of the occupiers in the selected area, and in addition, t have been complaints that certain smokeless fuels have not given satisfac in use. These matters are now being investigated.

Having received the necessary assurances from the carbonization indust that there will be adequate supplies of smokeless solid fuel, the Corpora have decided that all future clearance areas shall be declared smokeless zo This will ensure that all smoke emission will be eliminated in such areas as are redeveloped for residential purposes.

The first areas to be the subject of this action are described below, and it ntended that the declaratory orders shall become operative as from the August, 1955 :—

1. Area contained within Holland Street, Cuthbert Street, George Street, Shooter Street, to the rear of, and including the property numbered 17, Collinge Street, Whitby Street, Ridgway Street, Butler Street.

   This area comprises 19·3 acres of land on which, on the 1st November, 1954, there were situated 202 dwelling houses, 195 of which are the subject of the City of Manchester (Ridgway Street, Ancoats) Housing Compulsory Purchase Order, 1953, together with 14 properties used industrially and commercially. The remaining 7 houses are contained in a small area of 0·8 of an acre abutting the main site, and are to be the subject of separate compulsory purchase. All the buildings within the prescribed area are to be demolished and the area developed for residential purposes including some shops with living accommodation.

2. Area contained within Tipping Street, Ardwick (corner of Thomas Street), Chapel Street, passage at rear of 146 to 152, Tipping Street, Boden Street, Green Place to Paddock Street, behind the Corporation flats in Brydon Avenue to Green Street, Green Street, the side external wall of No. 7, Green Street, Green Avenue, passage at rear of premises in Ardwick Green North to Chapel Street, Chapel Street, Paddock Street, Thomas Street, Nicholson Square, boundary of the rear curtilage of the premises in Manor Street, Paddock Street and Thomas Street to Tipping Street.

   This area comprises 3·6 acres of land formerly containing property which was included in the City of Manchester (Ardwick) Clearance Areas Numbers 1 to 4, 1938.

3. Area contained within Temperance Street, Union Street, Tipping Street and the boundary of a proposed major highway, Ardwick.

   This area comprises 1·5 acres of land formerly containing property which was included in the City of Manchester (Ardwick) Clearance Areas, Numbers 1 to 4, 1938.

4. Area contained within Ancoats Grove, Ancoats Grove North, Johnsons Buildings, rear of All Souls Church to Harding Street, Harding Street, Kirk Street, Tutbury Street, Grace Street, Dundas Street and Palmerston Street, Ancoats.

   This area comprises 5·33 acres of land formerly containing property included in the City of Manchester (New Cross) Clearance Areas, Numbers 1 to 5, 1936.

5. Area contained within Mitchell Street, Frost Street, Beswick Street, Pollard Street, Little Holme Street and Love Lane, Ancoats.

   This area comprises 3·3 acres of land formerly containing property included in the City of Manchester (New Cross) Clearance Areas, Numbers 1 to 5, 1936.

ach of the areas will be redeveloped for residential purposes and each house, onette or flat will be provided with suitable approved solid fuel burning ances.

rding of atmospheric pollution

co-operation with the Department of Scientific and Industrial Research, spheric pollution in Manchester is measured by the aid of the following uments, viz., the Deposit Gauge, the Combined Smoke Filter and metric Sulphur Dioxide Apparatus, and the Lead Peroxide Apparatus.

ie Deposit Gauge is somewhat similar to a rainfall gauge, and its purpose is llect by means of a large funnel and bottle, the entire material deposited in nonth on the surface presented by the funnel. The deposit may include dew, melted snow and other forms of water ; soluble impurities dissolved n, either during its descent or while in the form of a cloud ; soluble rities deposited under their own weight in the funnel and afterwards ved by rainwater and washed into the bottle ; insoluble matter deposited its own weight ; and insoluble matter washed out of the air by rain.

ch month the material collected is analysed by the Public Analyst, and ied under the main headings of rainfall, insoluble matter and soluble r. Variations in deposited matter may be influenced by variations in ions from domestic and industrial chimneys and by variations in intensity irection of winds, by rainfall and by turbulence. It is generally understood n six months or more a deposit gauge receives a fairly uniform sample from lustrial chimneys within about half a mile, provided that no important ney is within 100 yards.

The Combined Smoke Filter and Volumetric Sulphur Dioxide Appar comprises two distinct parts. In the smoke filter section, about 50 cubic of air per day is drawn through a filter paper by means of an electrically dr pump. The solid impurities in the air which remain in suspension are colle on the filter paper, forming a small circular stain. The weight of pollutic estimated visually by comparing the stain with a standard scale of shades photometrically, by measuring the intensity of transmitted or reflected light a standardized photo-electric cell and galvanometer. After leaving the fi the air passes into the volumetric sulphur dioxide apparatus which consists bubbler containing dilute hydrogen peroxide. Sulphur dioxide is rem from the sample by the reaction—$H_2O_2+SO_2=H_2SO_4$.

An entirely different method of measuring sulphur dioxide in the air is b on the facility with which gaseous sulphur dioxide combines with the solid peroxide to form lead sulphate, the reaction being, $SO_2+PbO_2=Pb$ A prepared cylindrical surface of lead peroxide is exposed to the air for a mo with precautions to protect the surface from rain. The results are expre as milligrams of sulphur trioxide per day per 100 sq. cm. of lead pero surface and are usually considered as estimates of the activity of sulphur dio in the air. As an interpretation of the mean concentrations of sulphur dio in the air, the results are approximately true as regards distribution and an variation, but are untrue of irregular month-to-month variations, bec turbulence and rainfall, which decrease concentrations of sulphur dio appreciably increase its rate of reaction with lead peroxide.

There are seven deposit gauges within the City area, and in addition Corporation maintain one at Knowle House, Handforth, for the purpos comparison with those in the City area. A single deposit gauge rece material within a radius of about half a mile cannot yield results which representative of a whole industrial town. In addition, a change of direction brings different industrial chimneys into range. These diffic are partly overcome by averaging deposits over a long period of time, so smooth out wind-directional effects. Of course this method does not the deposits of different districts or towns to be compared, unless many de gauges are used.

The following table shows the amount of deposited matter collected d the year, along with the average for five years. The average for all gauges s a slight increase compared with the five year average. This rise has occasioned by increases at Baguley, Booth Hall and Rusholme, none of wh an industrial area. The gauge at Knowle House, Handforth, amidst semi surroundings, also shows an increase. Factors which may have cause increase are the higher rainfall, and the long periods of inclement weather necessarily caused increased coal consumption.

The sulphur pollution, measured by the lead peroxide method, indic decrease, compared with the five year average. This result may be d climatic conditions, because it is generally surmised that coal consum increased during the year, due to cool and rainy weather.

Deposited atmospheric pollution

(Tons per square mile)

Monthly averages together with the averages for the previous five years

	Rainfall (inches)		Insoluble matter		Soluble matter		Total solids	
ation	1954	Five yearly average	1954	Five yearly average	1954	Five yearly average	1954	Five yearly average
y	3·6	2·5	8·77	5·55	7·18	6·12	15·95	11·67
Hall	4·0	2·8	12·49	8·58	8·56	6·41	21·05	14·99
Park . .	4·0	2·9	6·73	9·67	7·66	6·57	14·39	16·24
ll	3·7	2·7	10·72	14·02	9·98	8·07	20·70	22·09
Park	3·8	2·8	23·91	32·17	13·16	11·57	37·07	43·74
lme	3·9	2·7	12·87	13·27	9·50	7·74	22·37	21·01
gton	3·5	2·6	10·23	10·94	7·48	5·92	17·71	16·86
ge for all ges	3·8	2·7	12·25	13·45	9·07	7·49	21·32	20·94

Station at Knowle House, Handforth

	Rainfall (inches)		Insoluble matter		Soluble matter		Total solids	
Station	1954	Five yearly average	1954	Five yearly average	1954	Five yearly average	1954	Five yearly average
e House . .	3·5	2·6	5·31	3·61	5·35	4·19	11·16	7·80

Sulphur pollution

(*Measurements by the lead peroxide method*)

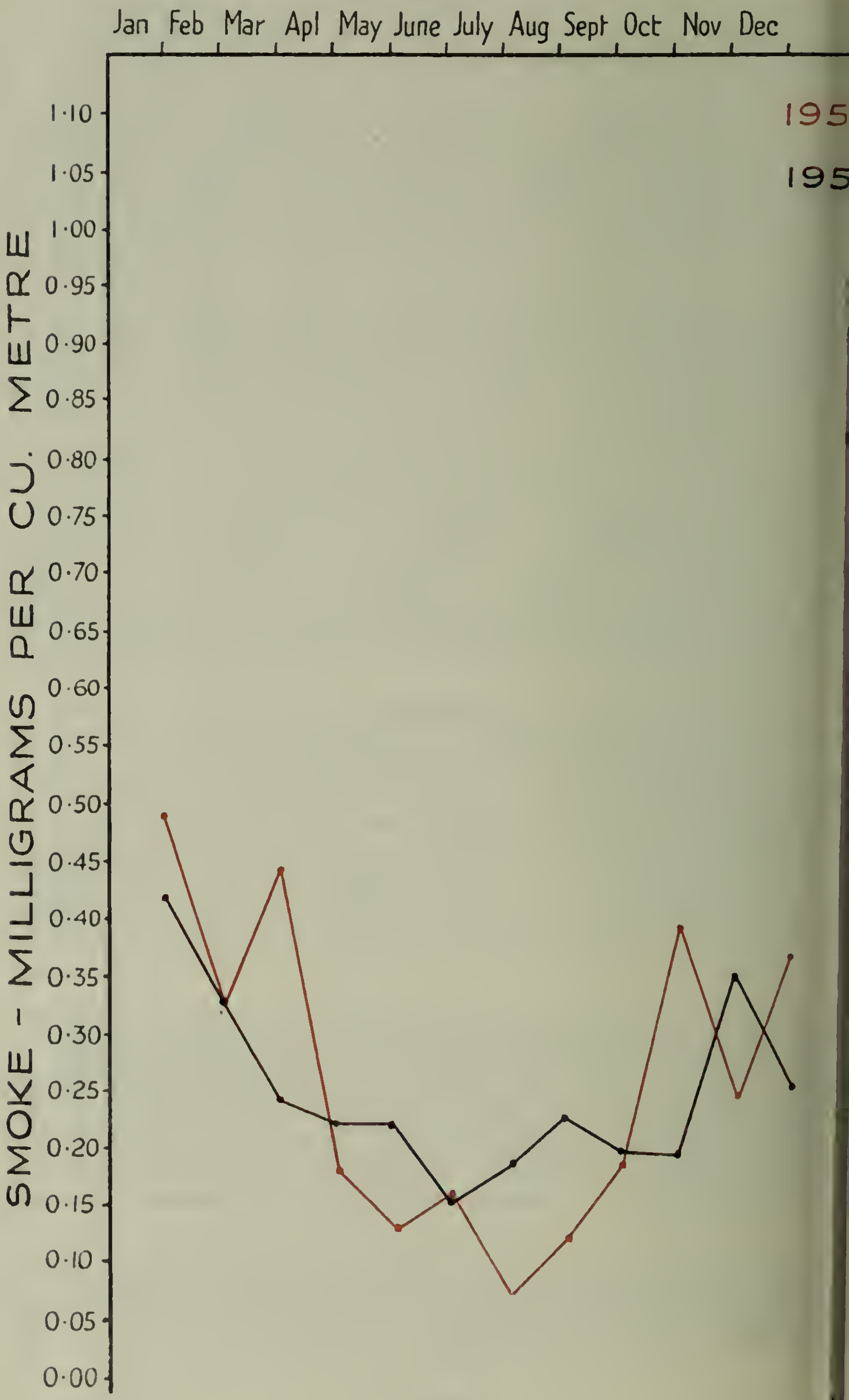
Veight in milligrammes SO_3 per 100 square centimetres exposed surface per day

Monsall		Rusholme		Withington	
954	Five yearly average	1954	Five yearly average	1954	Five yearly average
·08	4·61	2·29	2·86	1·52	1·75

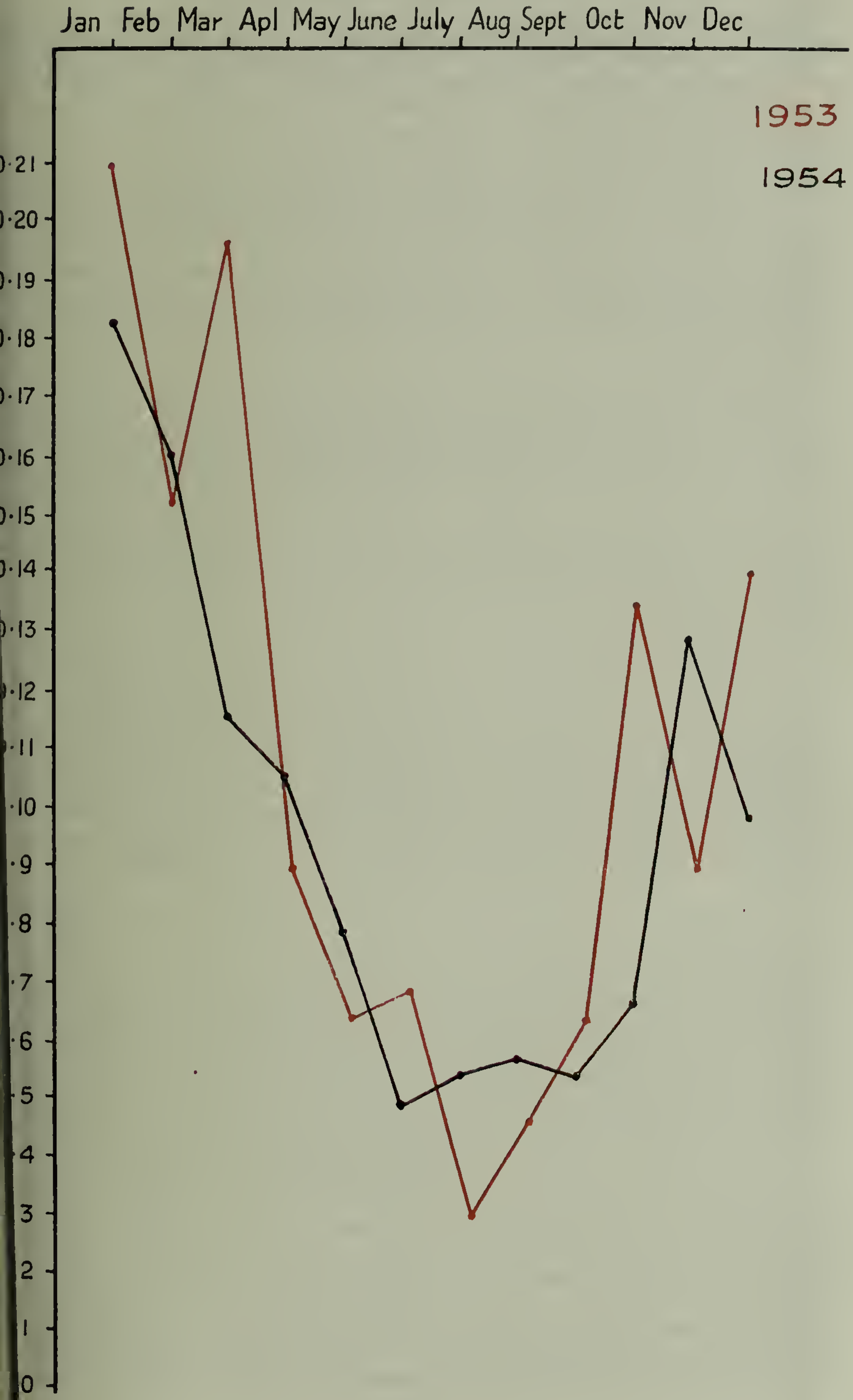
ulphur pollution, measured by the volumetric apparatus at Rusholme, ed a reduction compared with the previous year, but there was an increase e amount measured during the summer months of July and August. In instance, there is a corresponding increase in suspended impurity during same months. The reduction in suspended impurity shown on the npanying graph may have been caused, not by any actual reduction in ke emission in this mainly residential area, but by the cleansing effects of nged rainfall removing suspended matter from the atmosphere.

he heaviest pollution recorded was on January 1st, 1954, a day of fog and , when 2·055 milligrams of suspended matter were measured. The st pollution was on 4th April, 1954, a sunny day, when the filter collected milligrams of suspended matter.

Yearly cycle of suspended impurity (smoke) at Rusholme—monthly mean concentration in milligrams per cubic meter



Yearly cycle of sulphur dioxide by the volumetric method—
monthly mean concentration at Rusholme
SO_2 per million



HOUSING CONDITIONS

Part I of the Housing Repairs and Rents Act, 1954, which became oper
on the 30th August, amends and extends the existing law dealing with hou
conditions, and requires that generally within 12 months of that date e
local authority shall submit its proposals for dealing with unfit houses to
Minister of Housing and Local Government.

Unfitness is to be determined by reference to specified criteria and
proposals shall provide broad estimates of the total number of unfit ho
requiring demolition ; the time considered necessary to complete that w
and the number to be dealt with during a first five year programme eithe
demolition or patching by the local authority. This latter feature of patc
is an innovation arising from virtually 16 years standstill in any planned clear
of unfit houses.

Whilst some local authorities may be able to cope with the demolitio
all the unfit houses in their areas within the first five years, quite clearly m
including Manchester, cannot do so, and at the present rate at which new h
are being built they will require many more years to achieve this object.
the meantime, however, the Act provides that unfit houses which canno
demolished within 5 years may be made more tolerable for habitation
they can be cleared. Local authorities may, within the formal procedu
the Act, acquire unfit houses at site value and patch them until replace
becomes possible.

For houses which are not yet within the category of being irremed
unfit Part II of the Housing Repairs and Rents Act, 1954, allows a " r
increase " in rent subject to the fulfillment of prescribed conditions incl
compliance with a standard of "good repair " and " reasonably suitabl
occupation " having regard to the matters specified in Section 9 (1) (b) t
In addition, with the object of encouraging the improvement or conversi
structurally sound houses good for many years, the conditions to be sat
for grants under the Housing Act, 1949, have been modified.

Irremediably unfit houses will be acquired ultimately by the local auth
for demolition, but if this is to be deferred the occupiers will be given
tolerable conditions after the stage of acquisition is reached by the esse
though minimum, repairs or patching which will be carried out pending ult
demolition. In the largest industrial areas including Manchester, how
many years must elapse before all such unfit houses can be acquired and pat
pending their demolition. In the meantime the question arises as to the pro
of more tolerable conditions also being available to occupiers of the large nu
of houses which, by virtue of their numbers, cannot be acquired until a
siderable number of years have elapsed. It follows that the essential r
to keep the property wind and weathertight and free from serious nuisanc
continue to be a responsibility of the owners. In this regard, howeve
significance of the rent-economics of the issue cannot be ignored. It is virt
impossible to put those houses into a condition to qualify for the " r
increase " under the 1954 Act. Further, so far as old control house
concerned, and this type will predominate amongst the unfit houses, the 4
cent. " permitted increase " on the standard 1914 rent under the Rent
Mortgage Interest (Restrictions) Acts, for " old control " houses
" reasonable state of repair," may be withheld if a tenant obtains a certific

pair. If this occurs and the rent of the houses reverts to 1914 level, the equences will be serious to local authorities whose areas have a high ence of irremediably unfit houses, and it can be anticipated that even er difficulties will arise in securing attention to essential repairs by many e owners.

7,541 inspections were made to secure repairs under the Public Health Act isions and 14,315 preliminary and statutory notices served upon owners. t action was necessary in 113 cases, 58 nuisance orders being granted by the strates and in one instance a fine was imposed.

disquieting practice appears to be arising with some, fortunately relatively owners, who ignore or only partially comply with repair notices until the stage of court action or default work is reached. No doubt there is more one reason for this, but, so far as the Department is directly concerned, the iling shortage of inspectors and consequent inability to maintain the normal dure of prompt following-up the service of notices, may have given some uragement to those who wish to delay the inevitable repairs. If this has so, it is to be hoped that as the inspectorial position improves so will the for this type of irresponsible practice diminish.

uring the year, the City Council successfully sought power to secure ier attention to certain essential repairs with especial regard to temporary s certifiable as immediately necessary to avoid danger to health. Man- er is the only local authority possessing this power to undertake the rary repairs of the nature mentioned, and up to the end of the year there een 8 occasions where the circumstances were such as to warrant the diate application of the measure.

pairs were carried out by the Department to deal with nuisances at ses either at the request of the owners upon whom Public Health Act s had been served or in default. The total cost of this work was £4,556 s recoverable from the owners. Other work was carried out at 571 ses on the maintenance of public sewers under the provisions of Sections d 24 of the Public Health Act, 1936 at a total cost of £1,061. This was hargeable to the owners.

om the beginning of the year until the 29th August, 178 applications were ed from tenants for certificates of disrepair under the Increase of Rent and age Interest (Restrictions) Acts. The Housing Repairs and Rents Act ne operative on the 30th August and in the succeeding period to the ecember, 1954, 347 applications were received under the 1954 Act, of number 216 had received notice of repairs increase of rent. The total of pplications is in vivid contrast to that of 9 received during 1953, under ent and Mortgage Interest (Restrictions) Acts.

the earlier period of 1954, prior to the operation of the Housing Repairs ents Act, 4 applications were received from owners for reports that the s had been carried out so that certificates of disrepair previously granted be cancelled. 2 were granted and 2 refused. Toward the end of the 14 applications were received for the revocation of certificates of disrepair the 1954 Act : 12 were granted and 2 refused. Only one application was ed and granted in 1953 under the earlier Rent Acts.

The following statement tabulates the applications received from tenan certificates of disrepair since the commencement of the operation of the H Repairs and Rents Act, 1954 :—

Applications regarding dwelling-houses which have been the su of a notice of repairs increase under Part II of the Housing Repair Rents Act, 1954 :—

Granted	201	
Refused	1	
Withdrawn	14	
		21

Applications regarding dwelling-houses which have **not** been the subject of a notice of repairs increase under the Housing Repairs and Rents Act, 1954, but in respect of which permitted increases of rents are recoverable under Section 2 (1) (c) and (d) of the Increase of Rent and Mortgage Interest (Restrictions) Act, 1920 :—

Granted	50
Withdrawn	43

Not applicable—New control and notice of repairs increase of rent not given .. ..

Post-war clearance areas

The survey of areas of unfit houses with a view to representatio clearance continued and for that purpose detailed primary inspections made of 632 houses and re-inspections of 98 houses.

As at the 31st December, 1954, the total number of unfit houses Ridgway Street, St. George's, Miles Platting and Mill Street Clearance was 1,967.

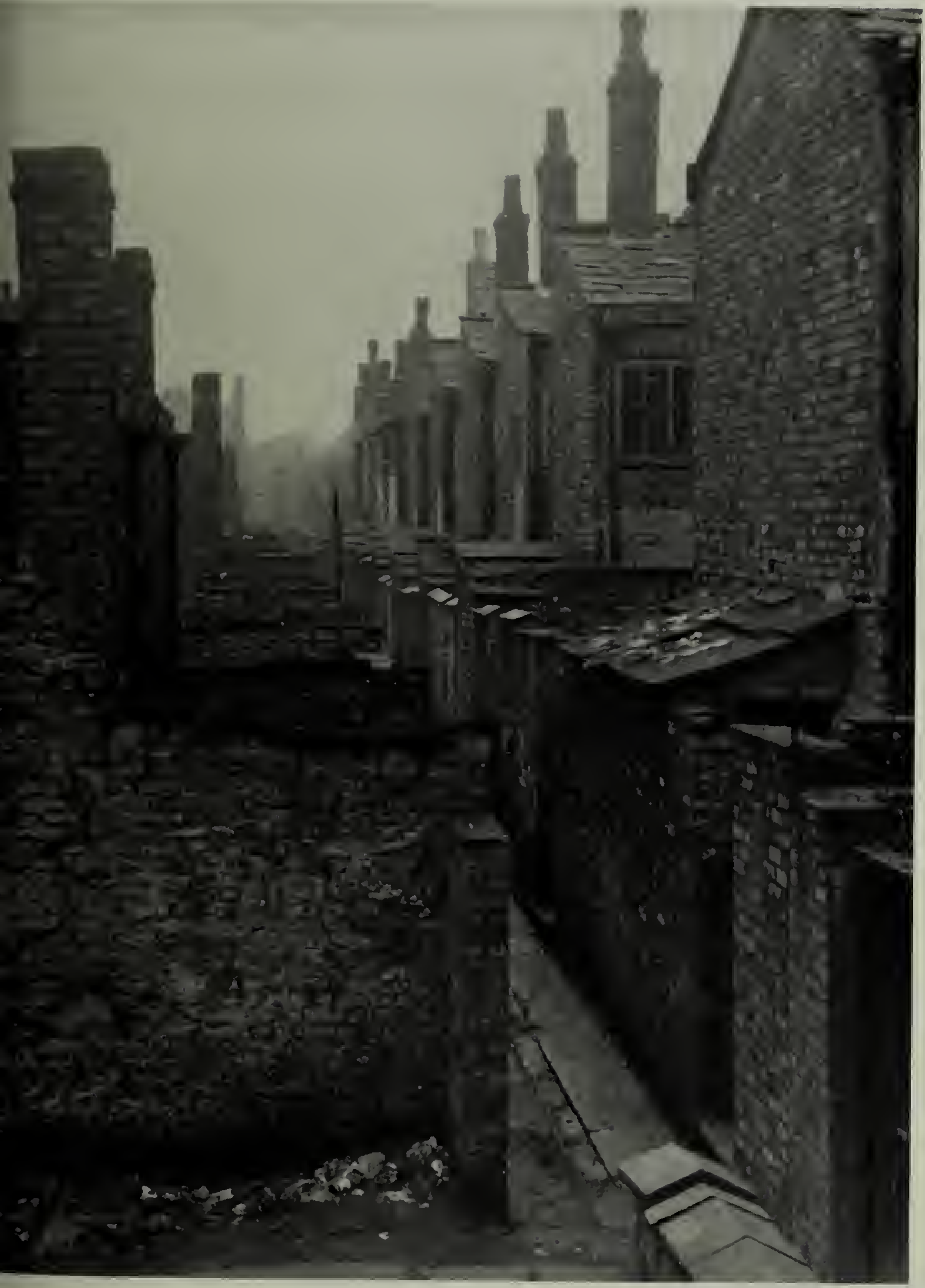
During the year 97 houses in these clearance areas had to be demolis reason of structural danger and 112 families were displaced of which 10 rehoused by the Corporation.

Ridgway Street (Ancoats) Housing Compulsory Purchase Order, 1953

The decision of the Minister of Housing and Local Government con this, the first post-war order, involving 238 unfit houses was received 25th March, 1954. The rehousing of the displaced families and the dem of the vacated houses is proceeding and at the end of the year 48 houses ha demolished, 42 families were rehoused by the Corporation and 3 families their own rehousing accommodation.

St. George's Clearance Areas, Numbers 1 *to* 24, 1953

These clearance areas, involving 504 unfit houses, which were repr on the 3rd July, 1953, have in the meantime received consideration Liaison Sub-Committee and the City Council. It is intended that thes shall be included in a Compulsory Purchase Order which will be submi the Minister of Housing and Local Government for confirmation in t future. Since the date of representation 40 of the houses have had demolished by reason of structural danger, 51 families have been rehou the Corporation and 4 families found their own accommodation.



Unfit Houses and Typical Bad Arrangement

s Platting Clearance Areas, Numbers 1 *to* 14, 1954

The inspection and survey of part of the Miles Platting district was pleted during the early part of the year and an official representation dated February, 1954, involving 771 unfit houses was submitted to the Health mittee and later declared to be Clearance Areas by the City Council. e the date of representation, 16 structurally dangerous houses have been olished and 22 families have been rehoused by the Corporation.

Street, Ancoats Clearance Areas, Numbers 1 *to* 13, 1954

A portion of the Ancoats district was inspected and surveyed later in the year an official representation dated 15th July, 1954, involving 570 unfit houses, submitted to the Health Committee and declared to be Clearance Areas by City Council. During the year 13 structurally dangerous houses in the area been demolished and 13 families have been rehoused by the Corporation.

war clearance areas

There are eight outstanding clearance areas which were represented prior to war, where Clearance Orders made by the City Council were not confirmed he Minister owing to the outbreak of hostilities and these have remained in ance. The areas include, St. George's, Hutchins Street, Harpurhey, nday Street, Ruth Court, Enoch Street, Fog Lane and Oldham Road (New ss), with a total of 1,907 houses of which 830 have been demolished as a lt of war damage, structurally dangerous conditions, serious disrepair or idation leaving 1,077 houses still to be dealt with.

The total number of houses demolished in the pre-war clearance areas during current year was 30 and 50 families have been displaced all of which were used by the Corporation.

vidually unfit houses

sing Act, 1936, *Section* 11

The demolition of 16 houses owned by a " man of straw " which were the ect of demolition orders made by the City Council was completed and all families rehoused by the Corporation.

chester Corporation Act, 1946, *Section* 31

When an application is made by a property owner or agent for permission emolish an occupied dwelling house, the Corporation will undertake to use the occupants if the house is found to be unfit for human habitation structurally dangerous. The number of voluntary applications by owners steadily increased in recent years, indicative of the deterioration of property e inner and older areas of the City. Many of these aged, worn-out and idated houses are in grave danger of collapse in advance of the proposed clearance and redevelopment programmes.

Unlike the planned approach, the demolition of large numbers of vidually unfit and structurally dangerous houses leave non-productive nt sites dotted about the City which do not provide suitable rehousing sites.

795 such houses were found to be unfit for human habitation and were also ified by the City Architect as structurally dangerous necessitating the using of 836 families by the Housing Department.

599 houses were reported by the City Architect as having been demolished ng the year of which 103 were situated in clearance areas.

573 families from individually unfit houses have been rehoused by the poration and 31 families found their own accommodation.

Applications for rehousing on medical grounds

There has again been a steep rise in the number of applications receiv approximately 800 in excess of last year's figures, which clearly indicates ever-growing need of so many families for suitable housing accommodati Letters from doctors, hospitals, welfare organizations and many other sour are daily received stressing the hardship and the detrimental effect of s standard, damp and overcrowded housing conditions upon the health of applicant families. Every case is investigated and receives careful considerat and, if the medical circumstances warrant such action, the applicant famil awarded a medical priority or preference in rehousing on health grounds the Director of Housing is informed. Owing to the large number of appl tions there is, unfortunately, some unavoidable delay in rehousing even the m serious cases owing to the continued shortage of new houses.

3,013 cases were dealt with during the year ; 2,439 or 81 per cent. (compa with 72 per cent. in 1953) warranted some degree of priority for rehousing medical grounds. The number of such families offered rehousing accommo tion to the end of the year was 744.

Abatement of overcrowding

It is not practicable for the Department to keep an accurate record of number of overcrowded houses in the City, but it is known that at least 2, dwelling houses were overcrowded under the National Standard on December, 1954.

203 new cases of overcrowding were reported during the current yea follows :—

Approximate number of overcrowded houses	Number of families	Adults	Child
1,299 houses with 1 family	1,299	7,959	2,68
630 ,, ,, 2 families	1,260	4,393	1,36
175 ,, ,, 3 ,, ...	525	1,214	35
67 ,, ,, 4 or more families	268	675	28
2,171	3,352	14,241	4,68

1,299 of the above families are occupying houses which are too small their requirements and 872 houses are overcrowded by reason of lodger fam

In all cases of overcrowding brought to the notice of the Departmen Director of Housing is informed if the tenant and/or lodger families registered for a Corporation house.

Improvement grants

Under the Housing Act, 1949 as amended by the Housing Repairs Rents Act, 1954, a grant may be made by a local authority to assist a pr owner in modernizing his house either by improvement or conver provided the house is suitable for the purpose and will provide satisfac housing accommodation for more than 15 years.

order to earn a grant it must be shown that, when the proposed work has done, the dwelling will—

(1) be in a good state of repair and substantially free from damp
(2) have each room properly lighted and ventilated ;
(3) have an adequate supply of wholesome water laid on inside the dwelling ;
(4) be provided with efficient and adequate means of supplying hot water for domestic purposes ;
(5) have an internal or otherwise readily accessible water closet ;
(6) have a fixed bath or shower preferably in a separate room ;
(7) be provided with a sink or sinks and with suitable arrangements for the disposal of waste water ;
(8) have a proper drainage system ;
(9) be provided in each room with adequate points for gas or electric lighting (where reasonably available) ;
(10) be provided with adequate facilities for heating ;
(11) have satisfactory facilities for storage, preparing and cooking of food ;
(12) have proper provision for the storage of fuel, where required.

pplications for improvement grants are dealt with by the Housing mittee but in each case the views of the Health Department are sought the suitability of the premises for improvement prior to the application considered by the Housing Committee. 45 such cases, principally from r/occupiers, were referred to this Department during the year. 10 were spect of the conversion of larger type houses into flats, and 35 for the rnization of older houses such as by the provision of bathrooms and hot supply. Adverse reports had to be given in 15 cases owing to the houses eing deemed suitable for improvement by reason of unfitness, bad arrange- or their anticipated limited life.

es let-in-lodgings

hilst the Department is aware of 1,098 houses let-in-lodgings, i.e., where are two or more lodger-families occupying houses " intended or used for ation by persons of the working classes," this number is considered to rstate the extent of such sub-letting in the City.

ntil the 30th August, when the Housing Repairs and Rents Act, 1954, ne operative, these houses were subject to the provisions of the Corpora- byelaws made under Section 6 of the Housing Act, 1936, relating to ry accommodation, water supply, artificial lighting of rooms, staircases assages, cooking and washing facilities and cleanliness of the premises. isits were made, in the course of which it was necessary to caution piers in 10 instances concerning dirty conditions.

he former byelaw provisions have been repealed by the Housing Repairs Rents Act, 1954. Section 11 of the Act moreover provides that where se let-in-lodgings is so far defective in one or more of the matters contained ection 9, dealing with natural lighting, ventilation, water supply and age and sanitary conveniences or facilities for the storage, preparation and ing of food and for the disposal of waste water, as not to be reasonably ble for such occupation, the local authority may require specified work to be rtaken to remedy the deficiencies and prescribe a limitation on the number dividuals or households to be accommodated.

Section 12 of the Act deals with the prevention of overcrowding of ho let-in-lodgings and provides that where a local authority considers that exce numbers of persons are being accommodated having regard to the ro available, a notice may be served prescribing the maximum permissible nu for sleeping in particular rooms or prohibiting the use of particular room sleeping purposes.

Common lodging-houses

A common lodging-house is defined in the Public Health Act as a h other than a public assistance institution (e.g., National Assistance B rehabilitation and reception centres or accommodation available thr Welfare Departments of local authorities), provided for the purpos accommodating by night poor persons, not being members of the same fa who resort thereto and are allowed to occupy one common room for the pu of eating or sleeping. There are 10 lodging-houses in the City considered within this definition and accordingly subject to annual licensing and co under the Public Health Act and byelaws. Nine of these lodging-houses pr accommodation for a total of 1,478 men ; 1 with 464 beds is owned b Department ; 3 others by 2 social organizations have 763 beds, whilst remaining 5 which are privately owned have a total of 251 beds. One lodging-house, also owned by the Department, provides accommodation 210 women.

In 1939 there were 50 common lodging-houses, 43 providing for a tot 2,969 males and 7 for 375 females, whilst in 1942 when the duties were t ferred from the Watch to the Health Committee, the number had fallen t 28 for 2,915 males and 4 for 310 females.

During the immediate post-war years, the common lodging-h generally were full to capacity, applicants regularly being turned away. the time of a recent survey made during the winter, however, as shown i accompanying statement, spare beds were found to be available at some o houses. In this regard, whilst there are numerous factors of signifi including varying standards of accommodation, it is of some relevance keepers evidently discriminate between applicants as being desirable o desirable on hygienic grounds and have a preference for regular rather casual lodgers.

In the course of the survey it was also found that lodgers were preponder either labourers (35 per cent.) or old age pensioners (also 35 per cent.). lodgers, apparently incapable of following any employment, represented 1 cent. of the total, whilst 6 per cent. were employed in miscellaneous occupa and 6 per cent. were unemployed at the time. This latter figure includ women resident at the Department's hostel for women, and approximate men at hostels owned by social organizations. These men however, were undergoing a course of rehabilitation at the hostels or doing other suitable there in return for their board and lodging.

Concerning the proper maintenance of common lodging-houses, attenti directed by the inspectors to the particular risk of vermin infestation. A liaison exists between the Department and the keepers of the houses, espe those maintained by the social organizations who, when lodgers are fou be verminous, insist on their attendance at the Department's clinic for per cleansing and disinfestation of their clothing. 183 lodgers were so tr during the year.

Address	Registe for	No. reside	1954	1939	Remarks
A	30	23	2/- per night; 12/- per week ..	10d. per night; 7/6 per week ..	All permanent lodgers.
B	60	45	4/- for 2 nights; 11/6 per week on ground floor; 10/6 per week on first and second floors; 13/- per week for cubicles	5/3 per week and 6d. per week extra for ground floor or cubicle	All permanent lodgers.
C	63	42	15/- per week. 16/- for cubicles..	6/- per week. 7/- for cubicles ..	Mainly permanent lodgers and no single night bookings.
D (Social organization) ..	428	428	Bed and breakfast 2/6 per night: 3/6 per night in cubicles; 3/- per night in rooms containing 3 beds	1/3: 2/-; 1/6	Full to capacity every night and could take more if accommodation was available. Approximately 12 per cent. of the lodgers earn board and keep by light work in the lodging-house. Others of the staff are temporary during rehabilitation course.
E (Social organization) ..	245	245	1/6 per night; 9/- per week; cubicles 13/- per week	10d. per night in dormitory; 1/- per night in cubicle; weekly rate not known	Similar to above. 90 per cent. of beds are occupied by permanent or semi-permanent residents.
F	70	54	15/- per week (all cubicles) ..	10d. per night	All are permanent lodgers.
G (Social organization) ..	90	61	One night 5/- bed and breakfast. Weekly: £2/2/6 bed and breakfast (dormitory); £2/4/6 bed and breakfast (cubicles)	35/6 per week (cubicles) and 35/- per week (dormitory) (bed and breakfast)	Mainly permanent lodgers.
H	28	28	3/3 per night; 21/- per week. 15 at present on weekly basis	1/- per night; 5/6 per week ..	Mainly permanent lodgers.
Ashton House (municipal hostel for women)	210	171	3/- per night; 19/3 per week .. (all cubicles)	10d. and 1/- per night; 5/- and 6/- per week	Mainly permanent lodgers.
Walton House (municipal hostel for men)	464	458	3/3 per night; 21/- per week .. (all cubicles)	1/- per night; 6/6 per week ..	Mainly permanent lodgers.

Caravan dwellings

Whilst Manchester has always had the sporadic temporary occupati
private land by individual nomadic caravan dwellers, the problem has be
more acute in recent years. This has been due to more prolonged stay
unsuitable sites by this type of caravaner forming small colonies where
satisfactory and insanitary conditions have been created.

In no instance is the consent of the land-owner sought for such occup
of his land and, although formal action by the Department against indiv
caravan dwellers does compel their removal, some of them return in spi
prohibitive orders. In addition, departing caravans are often succeede
others, and the laborious protracted process of invoking the nuisance proce
of the Public Health Act then has to be repeated.

In general it does seem that unless physical access to the land at least c
discouraged by such means as fences, or prevented by development of the
aggrieved householders in the vicinity will have to continue to accep
inevitable, the delays associated with the Department's only available proce
i.e. by service of statutory notices and court action. The owners of on
have undertaken to prevent access to their land by fencing if off, but the d
of practicability and prohibitive cost of this measure is such as to preclu
general application. Even fencing has not provided complete immu
concrete bollards have proved to be futile after an initial period of su
the bollards being smashed.

Caravans on nine sites were the subject of Court action, involving n
700 inspections and the service of notices on 188 different occupiers. C
proceedings were necessary in 38 instances ; nuisance orders were gr
against 23 caravan dwellers who remained on the sites after the issu
summonses and in one instance a daily fine of 1s. for each of 30 days was imp
for failure to comply with an order of the Court requiring removal of a ca
from a site and from the area.

At the end of 1953 action was being taken to deal with a contraventi
Section 269 of the Public Health Act, 1936, with reference to the unautho
use of land in a southern part of the City as a caravan site for more th
consecutive days. Subsequently, however, further proceedings prove
necessary, the caravans vacating the land. Later an unsuccessful applicatio
made for a licence to use the same land as a site for caravan dwellings.

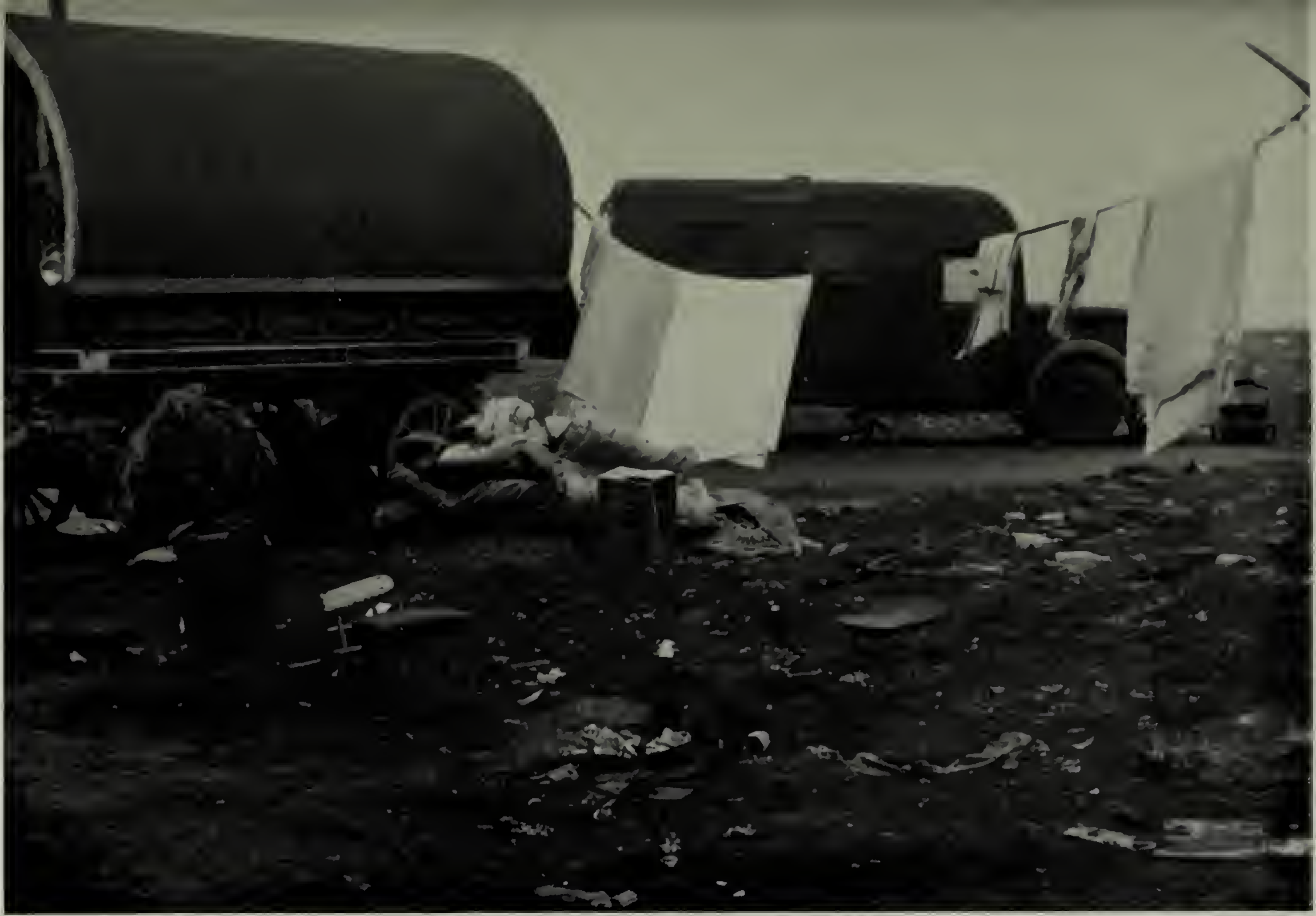
Canal boats

The use of canal boats as dwellings is controlled under the provisions
Public Health Act, 1936, and the Regulations made under the Canal Boats
1878. The number of boats now registered is 199 and 451 inspections of
plying within the City were made during the year.

In general, the living accommodation on the boats was found to be
clean condition and not contravening the Regulations.

No infectious diseases were notified during the year as having occur
canal boats within the City.

Manchester canal carrying companies do not allow women and childr
live on their boats, but if other boats in which women and children d
reach the canals within the City, the occupiers are advised as to the w
services available.



Insanitary Caravan Site

The Regulations governing the use of canal boats as dwellings were made 1878 and in recent years the view has been expressed that requirements emed appropriate in 1878 cannot be regarded as adequate in relation to ntemporary standards, especially with regard to sanitary conveniences, shing facilities, air space and water storage. The observations of interested ociations on this subject are understood to remain under consideration by Ministry of Housing and Local Government.

OCCUPATIONAL CONDITIONS

ctories

Factories Act, 1937—inspections of mechanical and non-mechanical factories, etc.

Premises	Number on register	Inspections	Number of written notices	Occupiers prosecuted
Factories in which Sections 1, 2, 3, 4 and 6 are to be enforced by local authorities	526	35	—	—
Factories not included in (i) in which Section 7 is enforced by the local authority	4999	1081	7	—
Other premises in which Section 7 is enforced by the local authority (excluding outworkers premises)	60	91	—	—
Total	5585	1207	7	—

Cases in which defects were found

Particulars	Defects				Number of cases in which prosecutions were instituted
	Found	Remedied	Referred to H.M. Inspector	Referred by H.M. Inspector	
nt of cleanliness (Section 1)	6	3*	—	6	—
rcrowding (Section 2)	—	—	—	—	—
easonable temperature (Section 3) ..	—	—	—	—	—
equate ventilation (Section 4)	—	—	—	—	—
ective drainage of floors (Section 6)	—	—	—	—	—
tary conveniences (Section 7)					
Insufficient	7	5†	—	6	—
Unsuitable or defective	136	34‡	—	132	—
Not separate for sexes	28	9	—	27	—
er offences against the Act (not cluding offences relating to outwork)	—	—	2	—	—
Total	177	51	2	171	—

* Includes 3 from previous year.
† Includes 1 from previous year.
‡ Includes 20 from previous year.

Factory outworkers

If certain classes of work are given out to be done outside factories, s as in the homes of the outworkers, the Department has to be aware of condition of the premises in which such work is done. Accordingly, emplo are required to keep lists of their outworkers and to send copies to the Dep ment on or before the 1st February and the 1st August in each year so a enable inspections to be made to prevent employment in unwholesome prem and ensure prevention of the spread of infectious disease. Where the outwor reside outside the City, the Department informs the local authorities concern

469 employers submitted lists containing 3,081 outworkers compared v 473 and 3,069 respectively in 1953. 841 of the outworkers resided out the City.

The work was distributed amongst 6 classes as follows : the makin wearing apparel occupied the majority of the outworkers (1,778), househ linen (92), soft furnishings (125), umbrellas (238), lampshades (3), and stu toys (4). Evidence of more raincoat and umbrella work being done tha the previous year reflects the nature of the weather experienced during year.

No cases of infectious disease were reported from the homes of outwor and generally a good standard of cleanliness was found. It was not neces to take any formal action in any instance.

It was ascertained that 6 employers were not supplying the Departn with the prescribed lists but remedied the omissions on request.

Shops and employment of young persons

In the administration of the legislation regulating working condition shops and the hours of employment of young persons in certain occupati 2,089 visits were made by the sanitary inspectors.

In no instance was it necessary to institute Court proceedings, but infor action was taken by inspectors to secure attention to omissions or deficien Thus 24 shopkeepers were found not to have the prescribed form as to assistants' weekly half-holiday ; 8 employers were not keeping the neces records of the hours of employment of young persons and 13 did not ex the notice dealing with the availability of seats for female assistants. In addit 1 shopkeeper had no record of his assistants' employment on Sund Insufficient or unsuitable facilities were found in connection with ventila at 6 shops, sanitary conveniences and washing accommodation also at whilst at 2 shops, where assistants were required to take meals on the premi suitable facilities were not available. In each case the necessary provis was made or in course of being made at the end of the year.

Exemption from compulsory Sunday closing which is available to pers observing the Jewish Sabbath was sought and granted to 7 shopkeeper accordance with the requirements of Section 53 of the Shops Act, 1950. Th were no cancellations and 290 persons are so registered with the Departm

Applications were received from the promoters of 5 exhibitions exemption from half-day closing, the retail trade being subsidiary or ancil to the main purpose of the exhibitions.

oncerning the Shops Act requirements on the weekly half-holiday ıg and the assistants' weekly half-holiday, some shopkeepers appear to me confused as to the application of the temporary exemption provisions ıble preceding or succeeding bank holidays. At those times, the Department iably receives many enquiries as to the permissibility of contemplated ;es and generally it is evident that a failure to distinguish between the sions dealing with weekly half-day closing of the shop and those concerned assistants' half-holidays at least contributes to the uncertainty of the irers.

GENERAL SANITARY CONDITIONS

tious diseases

he district sanitary inspectors investigate the occurrence of the following iable infectious diseases:— acute encephalitis, acute poliomyelitis, ro-spinal fever, diphtheria, dysentery, erysipelas and scarlet fever.

his duty entailed 1,460 visits to establish the source of the infection, e isolation, trace contacts and to prevent the spread of infection by food ding milk and ice cream) or other media and to make arrangements for eatment of articles exposed to infection.

)2 visits were also made to trace persons who had been in contact with ious diseases—including 6 contacts with smallpox patients.

nt control

ıe Prevention of Damage by Pests Act, 1949, requires every local authority sure that as far as may be practicable its district is kept free from rats nice. Accordingly, a continuous survey of the City has been maintained staff of operatives, under the supervision of the Rodent Executive Officer n assistant. In addition, owners and occupiers of " land," including any ng or part of a building and any land covered by water, are required to the Department of any substantial infestations of rats or mice. All notifications or complaints have been investigated and appropriate atory measures secured.

laints of infestation

uring the year, 3,080 complaints were received concerning suspected ations of premises not previously known by the Department to have nfested. This represented an increase of 280 (10 per cent) on the number ed during 1953. This increase, however, is not considered to reflect tual trend of infestation, but rather the desire of occupiers to seek advice.

ıe incidence of premises found to be infested has remained greatest in ıore central older areas where there is the largest amount of dilapidated rty and significant defects in drainage systems.

,330 premises (9,802 dwelling houses and 4,528 business premises) were l on complaints of infestations being received; infestations of rats were at 1,901 premises (1,244 dwelling-houses and 657 business premises) of mice at 2,384 premises (1,484 dwelling-houses and 900 business ses).

ne of the infestations were of a major character.

The nature of the premises concerned is indicated below.

Nature of premises infested

Type of premises	Number of premises			
	Rat infested			Mice infested
	Internal	External	Total	
Dwelling-houses	501	743	1,244	1,484
Factories, workshops, workplaces	162	24	186	180
Shops	71	22	93	120
Premises where food is prepared, sold or stored	72	24	96	126
Warehouses	46	1	47	77
Offices	33	5	38	117
Restaurants, licensed premises, clubs ..	51	8	59	47
Hospitals, welfare centres, public buildings	20	9	29	83
Schools, churches	32	10	42	126
Garages, wooden structures	8	18	26	—
Cinemas, theatres, public halls	6	—	6	13
Sewage disposal works, slaughterhouses, stables	—	8	8	—
Parks, sports grounds	—	1	1	1
Airports	1	1	2	2
Land and water courses	—	11	11	—
Tips	—	7	7	—
Fire stations	—	—	—	4
Baths	—	1	1	—
W/D property	—	3	3	4
Cleansing yards and depots	—	2	2	—
Totals	1,003	898	1,901	2,384

Survey of the City

In undertaking the obligatory survey of the City, 41,031 premises visited and appropriate eradicatory measures taken where infestations found.

Causes of infestation

The rat population of a city is such that only constant vigilance can any prospect of effective control of the inroads of rats into the sanitar economic life of the people. Whilst this vigilance must be exercised Department in the course of its statutory duties, it is equally importan ry occupier or owner of premises shall be determined not to accept stations as a necessary evil, until they assume acutely embarrassing ensions. Further, although notifications of infestations are legally required, ny occupiers or owners do not notify the Department but deal with the ible themselves. They should not, however, be satisfied with action virtually ted to effects, but should ensure that causes are also dealt with.

Obviously rats do not limit their depredations to individual premises and Department can, where necessary, secure " block " treatment to achieve most effective action directed against both causes and effects, action which not be anticipated from isolated unco-ordinated efforts of separate occupiers.

n dealing with infestations it is still found that defective drains are a major ce, especially in the older built-up central areas with a heavy incidence of ctural defects. In addition, of the total number of premises found to be nfested, more than 45 per cent. of the cases could be attributed to a failure ccupiers to practise elementary hygiene in the protection of food or in the er disposal of food debris, thereby inviting the establishment of infestation. feature is even more evident in relation to mice infestation of dwelling-ses.

Classification of causes of rat infestation in premises visited during 1954

Cause	Rat-infestation				Total premises rat-infested	Percentage of total rat-infested	Premises mouse-infested
	Internal		External				
	Business premises	Dwelling-houses	Business premises	Dwelling-houses			
ly due to or associated with ctive or disused drains or rs	88	135	53	249	525	27.62	—
of business in premises or ity	141	—	25	2	168	8.84	501
efuse dumps, market areas..	5	2	5	12	24	1.26	—
kept	—	—	3	12	15	.78	—
lated premises; defective ture	11	13	1	7	32	1.69	70
g operations, demolitions	—	2	6	16	24	1.26	—
y of open or culverted water-ses	6	3	7	53	69	3.63	—
in protecting food or food s	253	330	33	254	870	45.77	1,813
y sidings	—	—	1	8	9	.47	—
infestation	9	16	10	130	165	8.68	—
Totals	513	501	144	743	1,901	100.00	2,384

Tracing of rat burrows in relation to drainage infestation

Conditions found and action taken as a result of examinations	By City Surveyor	By owners and occupiers	By Sanitary Services Division	Tot
Number of examinations made	119	67	47	23
Sewers reconstructed	1	—	—	
Minor defects in sewers repaired	48	—	—	4
Disused privy-midden drains removed	13	24	—	3
Other disused drains or sewers removed or otherwise dealt with	20	6	—	2
Defective drains remedied..	—	40	20	6
Defective drains and sewers repaired by Corporation at owner's expense..	16	5	13	3
Outward burrows consolidated	24	8	—	3
Surface burrows consolidated	9	15	—	2
Undermining found to be due to causes other than rats	27	3	—	
Totals	158	101	33	2

Extermination service of the Department

This service is available without charge in respect of dwelling-ho Treatment of business premises is undertaken at the request of owner occupiers and is subject to the cost being recoverable on the basis of operator's time and material used.

The methods of treatment are in accordance with the standard guid of the Ministry of Agriculture and Fisheries and increasing use has been r of the anti-coagulant rodenticide, Warfarin, with its proved effectiveness relative safety.

3,211 treatments (representing an increase of 8 per cent. on the year 1 were carried out as follows :—

973 (30.3 per cent.) for rats, and
2,238 (69.7 per cent.) for mice:
3,144 treatments were by poisoning (1,945 by use of Warfarin),
52 by trapping, and
7 by gassing.

In the course of these treatments, 98,158 baits were laid ; 35,303 of were poison baits of which 18,258 (51.4 per cent.) were taken.

Number of dead rats picked up	543
Number of dead mice picked up	2,596
Estimated kill (based on poison baits taken)	32,882

nination by private operating companies

odent destructive measures continue to be carried out by private operating panies and other individuals on a contract basis with owners and occupiers.

is not obligatory nor customary for such operators to notify the rtment where their services are being used and generally, unless ascertained course of a survey, the Department is not informed of their activities.

nination by other Corporation departments and nationalized undertakings

adicatory measures are carried out at their particular properties by other tments of the Corporation and by the nationalized undertakings, some ich are particularly prone to infestation owing to the situation or character properties and the nature of the user.

iese departments and nationalized undertakings report that 573 rats and rous mice were destroyed on their properties, mostly by poisoning.

nination of rats in public sewers

ie special staff of the City Surveyor's Department continue to undertake ie baiting of the sewers.

rticulars of the work done during 1954 are tabulated below :—

Treatment	Number of manholes test baited	Number of manholes baited	Number of manholes showing bait takes
of initial treatment— 2 maintenance	—	1,926	286
it	2,818	—	358
maintenance treatment	—	7,007	1,204
maintenance treatment	—	2,316	572
Totals	2,818	11,249	2,420

s to treated premises

all cases, treatment by the Department is followed by post-baiting and s to determine the efficiency of the work. These revisits continue until is no evidence of bait being taken nor other visible signs of infestation.

ring the year, 6,012 revisits were made by the operators to infested ses.

4,604 of the premises concerned it was found that the treatments had l the infestations. This total includes 3,211 premises cleared by treatments aken by the Department, the remainder having been dealt with satisfactly by occupiers or operating companies.

s of interest to note that the increased availability of the anti-coagulant icide Warfarin tends to produce a corresponding increase in the number sons who undertake treatment of their premises themselves.

Eradication of insect pests

The Department is made aware of the existence of infestation of prem by insects either in the course of inspections, not necessarily made for purpose, or on advice being sought by occupiers as to the identity and eradica of particular specimens. These have included cockroaches, bed-bugs, fl mosquitoes, chironomidae (non-biting midges), moths, carpet beetles, fl beetles, wood boring beetles and ptinidae (spider beetles).

420 houses or 31 per cent. were found to be bug infested when inspe for inclusion in clearance areas. In addition, the tenants of 46 privately ow houses were advised on the eradication of similar infestations. The Hou Department found it necessary to disinfest with D.D.T. solution the furni and effects of tenants from 936 houses on their removal from clearance ar and 108 houses owned by the Housing Department were also disinfested that Department.

Specialist contractors engaged by the owners for the fumigation of a l flour mill duly observed the requirements of the Hydrogen Cyanide Regulati 1948.

With the resumption of slum clearance, consideration has been give resuming the use of fumigation with hydrogen cyanide to prevent the sp of bug infestation in the dispersal of materials from the demolished house in the transfer of infested belongings to new houses. Since 1951, the us hydrogen cyanide gas for the treatment of furniture on removal to the new ho has been replaced by spraying with D.D.T. solution and the experience of Housing Department has been that this is a satisfactory procedure. method to be adopted for the treatment of the infested, condemned prope however, remains under consideration pending the outcome of experienc using D.D.T. solution in an area of 238 houses, demolition of which is du commence shortly.

Properly used, hydrogen cyanide is a most efficient insecticide and ovi but post-war conditions present special difficulties to its general applica Thus, in pre-war schemes, it was found to be possible to secure vacant posses of every individual house forming a block or terrace of condemned ho virtually simultaneously, all the families being rehoused at the same t For various reasons it is not now possible to secure simultaneous rehou of families from a complete block. The time which now elapses before a b is vacated has an unfavourable sequel in encouraging vandalism which rap reduces the already seriously dilapidated property to a derelict state and would necessitate extensive work of sealing if gas were to be used.

Under these circumstances, as an experiment in a particular area, serio bug-infested timbers will be burnt in the course of demolition, and o infested timber, etc., will be treated with D.D.T. solution before dispersal.

Drainage works (defects and repairs)

In 1951 a joint committee representing the Building Research Station, Institution of Sanitary Engineers, the Institute of Plumbers and the Sani Inspectors' Association, initiated a survey on drainage design and prac more especially as applied to housing, with the object of collating informa on drainage problems and reaching conclusions on the most economical efficient methods of practice.

nchester was one of 31 authorities co-operating in the survey, and a which was published during the year, set out factual data on practice in ı to types, layouts and gradients of drainage systems ; bends, methods of t and protection of pipes ; construction of manholes, interception, ion and testing. The performance of drainage systems was reviewed gard to the frequency, location, causes of blockage and their clearance. ral, the conclusions reached were consistent with the experience of the ment, especially on the importance of the relation of proper design, materials and a good standard of workmanship to the reduction of the f installation and maintenance.

mination of drains is necessary for a number of reasons, mainly as a of complaints of percolation into floor cavities and cellars, subsidences , path and passage surfaces, offensive effluvia in or near premises, evidence burrowing in or around premises and choked drains.

drains of 223 premises were examined and statutory notices under the t sections of the Public Health Act, 1936, specifying the work to be done premises, were served. In addition the necessary work was undertaken arily by the owners at 8 premises and in another case the defective ion was found to relate to a sewer which was referred to the City Surveyor ion by that department.

d drains and sewers

der the provisions of Section 41 of the Manchester Corporation Act, he Medical Officer of Health or Sanitary Inspector is empowered to serve e, requiring compliance within 48 hours, regarding any stopped up drain

mediate action in connection with public sewers can be taken under the ons of Section 24 of the Public Health Act, 1936, as extended by Section the Manchester Corporation Act, 1946.

notices for 487 premises were served during the year in respect of stopped ins, etc. At 63 premises the remedial work was carried out by the ge etc. Works Branch in default, on the notices not being complied with owners or as a result of the Corporation being requested to undertake rk.

reports were made for immediate action in connection with the defective ion of public sewers affecting 446 premises. The necessary works were out by the Drainage Branch, without notice, in accordance with the t emergency provisions.

ry accommodation

ere are 360 premises, including 319 houses or farms, in the City where commodation consists of pailclosets or privies, most of these being in ythenshawe district. The majority of the premises concerned are situate s where no sewer facilities are available.

12 premises conversions to waterclosets have taken place on sewers ing available, and additional conversions were pending at the end of the In each case the appropriate grants have been made by the Department re the abolition of these obsolescent closets.

new building sites the Department, wherever practicable, requires the ion of waterclosets for the operatives, but where this is impracticable sets are made available in temporary structures provided by the ctors to the standard prescribed by the Department and subject to uent supervision by the district inspectors. The Cleansing Department es for the emptying of these pails.

24 plans were received concerning alterations and additions to sa conveniences and washing facilities to comply with the provisions o Factories, Public Health and Shops Acts in existing buildings. Most o work arose from informal representations by inspectors to the owne occupiers of the premises concerned on the need for improvements.

Tipping of refuse

36 privately owned sites in the City are in use, though not continuousl the disposal of trade refuse, building debris and other similar refuse. Re visits to these sites are made by the district sanitary inspector. Exper shows that whilst the greatest risk of nuisance arises from the unauthc tipping of organic refuse, generally the tip owners or contractors recogni need for proper care and it has not been necessary to take any formal actio

Spraying with water continued at a disused colliery tip with a deep s fire previously the subject of action by the Department. Although the trea has not extinguished the combustion, the condition has been kept within b to prevent a nuisance developing.

4 other sites also visited by the inspectors are used by the Clea Department for the disposal of refuse by " controlled tipping." This fo tipping, which was introduced into this country in 1922, is the methodic of a natural process of the reduction of complex organic contents of ref simpler innocuous substances. Its practice is subject to a prescribed tech to provide an efficient and safe way of refuse disposal and it is not to be cor with the obsolete method of indiscriminate dumping of domestic refuse would create a nuisance.

The Director of Public Cleansing has reported to the Department c amount and method of disposal of refuse by his department ; 154,565 tons dealt with by controlled tipping, 43,854 tons by separation and incineratio 8,829 tons by utilization, i.e., salvaged materials, clinkers, etc.

Offensive trades

There are 57 premises in the City at which " offensive trades " with meaning of the term under the Public Health Act, 1936, and the Manc Order of 1921, are established.

These trades are blood boiler 1, bone boiling and fat extraction melters 2, fish curers 2, fish curer and pickle manufacturer 1, gut scra oil distiller 1, pickle and sauce manufacturers 2, rag and bone deale rubber spreaders 7, rubber substitute spreaders 3, size maker 1, soap boi tallow melters 2, tanners 3, tripe boilers and dressers 5.

It was not found necessary to take formal action in respect of any registered premises : at one of the premises which were the subject of proceedings in 1953, extensive alterations and re-equipment were n completion at the end of the current year.

Effluvium nuisances

The statutory power for the control of effluvium is contained in the nu sections of the Public Health Act, 1936. This entails the customary pro of service of abatement notices and application to the Court for nuisance in the event of non-compliance. In addition, however, effluvium arisin a process scheduled under the Alkali Works (Regulation) Act, 1906, is s to more specific control exercised by the Ministry of Housing and Local G ment through H.M. Inspector of Alkali Works, with whom the Departm in close contact.

omplaints received continued to vary considerably as to nature of effluvia the districts in which they were reported. Some complaints related to idual premises and after investigation were promptly dealt with, no further n, statutory or otherwise, being necessary. Some common complaints of type included the presence of dead rodents, temporarily unsealed drain , and leaking gas fittings or pipes. For this latter complaint the services e North Western Gas Board are made available immediately on telephone est by the district sanitary inspector.

oint investigation by the district inspector and the inspector of the Rivers rtment as to the source of an offensive smell which was intermittently eptible at one industrial premises, resulted in the cause being determined e discharge of a trade effluent from neighbouring premises into a sewer ng up a reaction within the sewer which produced the emission of hydrogen ide.

s well as such specific complaints, more generalized complaints have been of effluvia affecting the whole of a particular district in or adjacent to strial areas. In these cases it is helpful to the Department and H.M. Alkali ks Inspector when complainants supply information of as detailed a nature practicable, e.g., the time or times of the occurrence, where the effluvium perceptible and its nature. Such information especially where the vium is intermittent in character, as is so frequently the case, greatly dites the subsequent investigations.

n one instance, investigations yielded strong presumptive evidence that ffluvium, which was intermittent in character on several nights at different s, was due to the escape of hydrogen sulphide from a particular industrial leeward of the affected area. The plant was found to be provided with s to prevent such emissions. This included a special detector apparatus h, however, did not appear to have been operating effectively. The mstances were referred to and dealt with by H.M. Alkali Inspector.

eneralized complaints in respect of effluvium affecting another area nued to be investigated without however, any definite location of the cause. putation of residents from the area was received by the Chairman of the h Committee, the Medical Officer of Health, H.M. Alkali Works ector and the Chief Sanitary Inspector, when discussion ensued on the ience of the residents with a view to the accurate location of the source of omplaint and appropriate action by the Department or H.M. Alkali Works ector.

e

he Manchester Corporation Act, 1946, Section 40, prescribes that a nuisance shall be liable to be dealt with as a statutory nuisance under ublic Health Act, 1936. Such a nuisance is deemed to exist where the is excessive or unreasonable or unnecessary and is injurious or dangerous ealth. It is a good defence, however, in respect of any noise arising from a or occupation if the best practicable means of preventing or mitigating nuisance, having regard to cost and other relevant circumstances, are ted.

omplaints which the inspectors investigated related to 29 different sources oise and were concerned more with particular times, e.g. night work, with high levels of intensity of sound, and to intermittent, more than nuous, noise.

So far as industrial sources of noises are concerned, the risk of nuis is generally obviated by the modern zoning of industrial areas under t planning provisions and, with few exceptions, the Department's experi of this type of noise occurs in the older areas of the City where the indiscriminate mixing of industry and housing. In those areas the risk noise nuisance from industrial sources is ever present and not necess capable of complete removal. Fortunately, however, factory owners been found to be co-operative in at least reducing the emission of noise f their premises. For this purpose measures for the reduction of vibra proper mounting or re-siting of machinery or re-adjustment of working h have been adopted voluntarily following representations by the inspectors

Land used by pleasure fairs

There are 91 sites which are known by the Department to have been on different occasions by pleasure fairs.

During 1954, fairs were in operation on 27 occasions on 23 different including 5 public parks, 1 site owned by the Estates Management Comm and 1 " agreed " privately-owned site. These 7 fairs all received prior appr Another fair was held in the Manchester portion of Longford Park.

The remaining 19 fairs were held on sites which the Department does deem to be suitable for that purpose : noise nuisances were found to exi 4 fairs and on representation by the sanitary inspectors to the propriet one, the equipment was resited, whilst the other 3 fairs vacated the sites b any formal action could be taken.

No statutory notices were served during the year, but one cautionary l was sent to the owners of one of the unsatisfactory sites.

Further discussions have ensued between representatives of the Corpor and of the Showmen's Guild with the object of the Guild undertaking n permit any of their members to use any site in the City for pleasure fairs than those specified on an " agreed list." The issue remains under consi tion, but by arrangement with the Corporation increased use is being ma sites available in public parks.

Rag flock and other filling materials

There are 108 premises where fillings designated under the Rag Flock Other Filling Materials Act, 1951, are used in the manufacture of bed (63), upholstery (35), soft toys (7), cushions (2) and baby carriages (1). premises were newly registered and 6 were discontinued.

Four premises are licensed for the storage of rag flock for distributio the users at their registered premises; the storage at another premises discontinued during the year.

No rag flock is manufactured within the City.

22 samples of designated filling materials; cotton felt (7); coir fibre kapok (5); rag flock (4); and feathers (1), were taken and examined by prescribed analysts who found that the appropriate standards prescribe the Regulations were satisfied.

t of washed rags and second-hand clothing

here was a distinct reduction in the amount of material for export requiring epartment's certification as to cleanliness. This reduction was particularly eable in the trade of second-hand clothing.

Articles	Bales or bundles	Country
ed rags	135	S. America
	125	S. Africa
	40	Eire
	1	New Zealand
nd-hand clothing	67	Africa
	2	Greece
	1	Czechoslovakia

ccording to the particular materials involved and the requirements of the rting country, the certification dealt with the customary treatment of :—

(*a*) washing and sterilizing by boiling in caustic soda solution, or

(*b*) high pressure steam disinfection, or

(*c*) formalin disinfection.

ange of toys for rags

nder the provision of Section 154 of the Public Health Act, 1936, it is ffence for any person who collects or deals in rags, old clothes or similar les to sell or deliver, whether gratuitously or not, any article of food or to any person or any article whatsoever to a person under the age of ears.

erbal cautions were given by district sanitary inspectors in 3 cases where rs were exchanging toys for rags from children.

ming baths

isits were made to the 16 Corporation and the 5 privately owned swimming during 1954. Tests of the pH value of the swimming bath water were d out during the visits to check that the alkalinity was such as to maintain ive filtration. Similarly tests were made to determine whether the free ine present in the swimming bath water was in accordance with that mmended by the Ministry of Health to ensure adequate sterilization.

amples of water were also taken from the plunge baths for bacteriological ination by the Public Health Laboratory, and in every case it was found the water was being maintained in a satisfactory condition.

he practice continues of supplying reports on the tests and bacteriological inations to the owners of the privately owned baths, and to the General rintendent of the Corporation Baths and Wash-houses Department, whose interest has ensured that the efficiency of the treatment plants has been tained.

Establishments for massage or special treatment

The Manchester Corporation Act of 1924 and byelaws made in control establishments for massage and special treatment, and included i licensed establishments there are 53 for chiropody treatment, 14 for ph therapy and chiropody, and 21 for physiotherapy. These do not inc hospitals which are excluded from the provisions of the Act

In considering applications for licences, regard is had to various fa including the evidence of competency of the applicants to undertake particular treatment, and although not specifically concerned with conditions governing the licensing of establishments under the local Ac authoritative criterion has become available in the qualifications presc in the National Health Service (Medical Auxiliaries) Regulations, 1954.

The standard so prescribed virtually is that which has been required b Department in respect of any licensing applications received since the d were transferred from the Watch Committee in 1944. In this regard Department's standard was sustained by a decision of the Magistrate's C on an unsuccessful appeal by an applicant against a decision of the Corpor not to grant him a licence. The qualifications of two other applicants also deemed not to provide adequate evidence of competency and applications accordingly were refused by the Corporation.

Licences were issued to two applicants to carry on establishment massage or special treatment and 89 licences were renewed in respect of establishments, mainly for chiropody, and to a lesser extent physiotherap

Hairdressers or barbers

The Manchester Corporation Act, 1946, Section 42, requires pe carrying on the trade or business of a hairdresser or barber to register his and residence and also the place of his business with the Corporation. liaison is maintained with the City Surveyor's Department to ensure obser of town planning provisions in respect of any new establishment invo change of user of premises and any applications approved under such provi are subject to the requirements of the Health Department being satisfie

There are 673 persons registered under the Act and they are requir comply with the byelaws dealing with the cleanliness of their pren instruments, towels, materials and general equipment. The byelaws also re cleanliness of the hands, clothes and overalls of the hairdressers or barb

It has not been necessary to institute proceedings in respect of any c vention of the byelaws.

Sale of certain poisons

Part II of the Poisons List in the Pharmacy and Poisons Act, 1933, presc the poisons which may be retailed by " listed sellers," i.e. listed by a authority, in addition to " authorized sellers," i.e., registered by the Ph ceutical Society.

During the year, the number of listed sellers was reduced to a tot 1,166, including 89 new registrations and 141 listed persons discontinue sale of these poisons. There were also 9 changes of occupiers after re of registration. £306 18s. was received in fees for listing and renewals.

The Part II poisons involved are mainly constituents of disinfec insecticides, fungicides, rodenticides, household cleaning agents and dyes, retailed by grocers, hardware dealers, seedsmen, horticultural sup and hairdressers.

ertain poisons such as arsenical compounds, nicotine and mercuric ides, although included by reason of their more dangerous nature in the schedule to the Poisons Rules to which special restrictions apply, may be in a limited form by a listed seller, but only by him or his named deputy.

xcept for ammonia, hydrochloric acid, nitric acid, potassium quadroxalate ulphuric acid, poisons sold by listed sellers must be in a closed container osed by the manufacturer.

he district sanitary inspectors supervise the general requirements to be rved in connection with the sale of the Part II poisons, having especial d to labelling, storage arrangements and inspection of records.

mations

hree exhumations took place at two of the Corporation's cemeteries and was followed by re-interment within the same cemeteries. The district ary inspector attended in each case and the conditions of the Home Office ce directed to securing due observance of matters affecting public health decency were satisfied.

connection with the air transport of a body to Egypt, the casket containing orpse was inspected and hermetically sealed in the presence of the sanitary ctor and the following certificates issued in accordance with Customs lations:—

(1) Medical certificate that cause of death was not due to any communicable disease.

(2) Certified copy of death certificate as issued and signed by the Registrar.

(3) Coroner's removal certificate.

(4) Certificate of embalmment.

(5) Certificate that the body was in a lead or zinc-lined casket and hermetically sealed.

t one cemetery not under the ownership of the Corporation but subject Order in Council, it was found that conditions prescribed in the Order the provisions of Section 53 of the Manchester Corporation Act, 1950, ng to the depth of graves, were not being observed. The irregularities dealt with by attendance of the trustees and others personally concerned e the Committee and assurances were accepted on future compliance the Corporation's requirements.

ic mortuaries

ollowing the investigation in 1953 of the 4 public mortuaries and post-em examination facilities provided by the Watch Committee at different e stations, the circumstances have been reviewed and a decision made e City Council that a modern mortuary should be erected. Accordingly, have been prepared by the City Architect for a scheme to be undertaken conveniently central site.

PUBLIC CONVENIENCES

In the implementation of the Health Committee's policy to increas
number and improve the standard of the public conveniences, two
conveniences, each with accommodation for both sexes, have been op
during the year at Ogden Lane, Higher Openshaw, and Burton Road,Within

There are now 151 conveniences providing accommodation as s
below:—

Males—

With urinal, watercloset, washing and parcel storage accommodation .. .. ..
With urinal, watercloset and washing accommodation .. ..
With urinal and watercloset accommodation .. ..
With urinal accommodation .. ..

Females—

With watercloset, washing and parcel storage accommodation .. ..
With watercloset and washing accommodation .. ..
With watercloset accommodation .. ..

Conveniences with watercloset accommodation continue to have
watercloset available without charge.

The provision of further conveniences within the Department's three
programme does not proceed strictly according to schedule mainly be
of difficulties experienced in securing possession of sites which will give ea
identification and access, and yet not give rise to objections by local resi
or be inconsistent with some Town Planning criteria. However, some ease
of this position has taken place during the past year and it has been pos
to proceed with schemes at Mauldeth Road, Burnage; Mundy Street, Longs
Mount Road, Gorton; and Barlow Moor Road, Didsbury. In addition
adaptation of the conveniences at Great Bridgewater Street, City, to pro
facilities for both men and women was nearing completion at the end o
year. A proposal to incorporate accommodation for males at the Kitchen
Crumpsall females convenience met with objections which caused abandon
of the scheme.

All the conveniences in the suburbs and several in the central area o
City remain open throughout the night and very few difficulties have
encountered. The introduction of illuminated direction signs has been a de
improvement enabling the available facilities to be readily located.

A small minority of the public, believed to be for the most part y
persons, cause a considerable amount of wanton damage and misuse. Not
does this persistent malpractice add heavily to the cost of maintenance
it frequently deprives the public of the service until the damage can be rep
Theft or damage to coat hooks, electric lamps, door bolts, watercloset
and other fittings continues to be a constant annoyance to the public an
Department. Similarly, the prevalence of obscene writing and drawings o
doors and walls is a matter of concern and it is almost impossible to d
offenders. Experiments are being carried out with different types of sur
finishes to walls and doors in an attempt to minimize this objectionable
deplorable practice.

REPORT OF THE PUBLIC ANALYST

A. N. Leather, B.Sc., F.R.I.C.

lore than in other years, any introduction to this report would be nplete without an acknowledgment of my indebtedness to the staff of laboratory and to the sampling officers and other members of the Health rtment staff for their consistent support and helpfulness directed towards ompletion of the year's work. This support was fully exemplified, and ed put to a severe test, by an unpredictable event. Late in the year a gale xtreme severity caused extensive damage to the roof of the laboratory, for three weeks portions of the laboratory were vulnerable to rain, which nes fell with torrential violence. Only a determination to carry on under itions of extreme difficulty, together with some very helpful timing in submission of samples, made it possible for the work to continue. The effect, as shown by any reduction in the total number of samples examined he year, was gratifyingly small.

ompared with the total number of such Orders already issued and re- ing in force, the number of new Food Standards Orders and amendments d during the year 1954 was small. An important new order was the Food dards (Margarine) Order which laid down a standard for vitamins A and margarine, at the time when the manufacture of margarine was decontrolled. as made clear that the supervision hitherto exercised by the Ministry of l upon the vitamin content of margarine would cease, and that the duty nforcing the Order would rest with the Food and Drugs Authorities. Order itself prescribed a method of assay for vitamin A, a method embodying dern technique and some specialized and costly apparatus. Later in this rt, mention is made of the work done under the Order.

n November, the Food and Drugs Amendment Act, 1954, was passed into but is not to come into operation until a date to be appointed by the ster of Food. Some comments upon this Act and its likely effects are in the body of this report.

f all samples submitted and examined under the Food and Drugs Act related Acts and Regulations, the proportion of samples found to be lterated or otherwise giving rise to irregularity" was 4·5 per cent. Though y be satisfactory to note a fall since last year's corresponding figure of er cent., due allowance should be made for the occurrence of purely om fluctuations.

n an attempt to add to the interest of the mainly analytical comments unsatisfactory and other samples, brief notes are added indicating any er action taken. These notes are based upon information provided by Medical Officer of Health and by the Sanitary Services Division of the rtment.

Food and Drugs Act, 1938

Summary of samples examined

Article	Number examined				Number adulterated or otherwise giving rise to irregularity			
	Formal	Informal	Private	Total	Formal	Infotmal	Private	Tot
Milk*	696	699	—	1,395	79	37	—	11
Milk (sterilized)	154	29	—	183	2	—	—	
Ice cream and ice-lollies	11	12	—	23	—	—	—	—
Ice-lolly ingredients	—	6	—	6	—	—	—	—
Alcoholic liquids—								
Spirits	22	1	—	23	2	1	—	
Wines	16	—	—	16	—	—	—	—
Wine cocktails	2	—	—	2	—	—	—	—
Others	18	12	1	31	—	—	1	
Bacon and ham	19	1	—	20	—	—	—	—
Baking and golden raising powder	—	15	—	15	—	—	—	—
Barley	21	1	—	22	—	—	—	—
Biscuits	40	—	—	40	—	—	—	—
Blancmange powder	1	3	—	4	—	—	—	—
Bottled:—								
Beetroot	—	1	—	1	—	—	—	—
Chicken broth	—	1	—	1	—	—	—	—
Fish	—	2	—	2	—	—	—	—
Fruit juice	—	1	—	1	—	—	—	—
Tomato juice	—	2	—	2	—	—	—	—
Bread	21	4	—	25	—	2	—	
Bread, fancy	4	2	—	6	—	1	—	
Butter	37	1	—	38	—	—	—	—
Cake and pudding mixtutes	1	17	—	18	—	—	—	—
Canned:—								
Cream	—	18	—	18	—	—	—	—
Fish	—	13	—	13	—	—	—	—
Fruit and fruit juice	—	12	—	12	—	1	—	
Meat and meat products	—	16	—	16	—	—	—	—
Soup	—	19	—	19	—	—	—	—
Spaghetti	—	2	—	2	—	—	—	—
Sweet pudding	—	6	—	6	—	—	—	—
Vegetables	—	34	—	34	—	—	—	—
Cereals (prepared)	13	1	—	14	—	—	—	—
Cereal soup mixture	—	1	—	1	—	1	—	
Cheese	13	9	—	22	—	1	—	
Cheese spread	—	12	—	12	—	—	—	—
Christmas pudding	—	7	—	7	—	1	—	
Cocoa	23	—	—	23	—	—	—	—
Coconut, desiccated	14	1	—	15	—	—	—	—
Coffee	29	—	—	29	—	—	—	—
Coffee and chicory	7	2	—	9	—	—	—	—
Coffee and chicory essence	—	12	—	12	—	—	—	—
Coffee and chicory extract, dry	1	1	—	2	—	—	—	—
Cornflour	26	2	—	28	—	—	—	—
Custard powder	31	1	—	32	—	—	—	—
Dandelion coffee essence	—	1	—	1	—	—	—	—
Dried fruits:—								
Vine fruits	50	2	—	52	1	—	—	
Others	14	3	—	17	—	1	—	
Dried herbs	—	3	—	3	—	—	—	—
Dried pulses	61	1	—	62	2	—	—	
Dried soup	—	3	—	3	—	—	—	—
Dried yeast	—	1	—	1	—	—	—	—
Dripping	2	3	—	5	—	—	—	—
Fish cakes	2	3	—	5	—	—	—	—
Fish dressing	—	4	—	4	—	—	—	—
Fish paste	3	2	—	5	3	—	—	
Fish (prepared)	1	2	—	3	—	—	—	—
Fish (smoked)	—	1	—	1	—	—	—	—
Flavouring	—	8	—	8	—	1	—	
Flour confectionery	22	8	—	30	—	1	—	
Flour, plain	9	1	—	10	—	—	—	—
Flour, self-raising	32	—	—	32	—	—	—	—
Food beverage powder	5	6	—	11	—	—	—	—
Fruit juice	2	2	—	4	—	2	—	
Gelatine	—	3	—	3	—	—	—	—
Golden syrup and treacle	2	15	—	17	—	—	—	—
Gravy browning	1	11	—	12	—	—	—	—
Gravy powder and gravy salt	—	9	—	9	—	—	—	—
Ground almonds	4	—	—	4	—	—	—	—
Ground mixed nuts	—	1	—	1	—	—	—	—
Ground rice	5	—	—	5	—	—	—	—

Article	Number examined				Number adulterated or otherwise giving rise to irregularity				Percentage of samples unsatisfactory
	Formal	Informal	Private	Total	Formal	Informal	Private	Total	
	5	7	—	12	—	—	—	—	—
powder	—	1	—	1	—	—	—	—	—
lly preparations)	5	18	—	23	—	—	—	—	—
king fat	41	2	—	43	—	—	—	—	—
ired barley powder	—	3	—	3	—	—	—	—	—
food	1	—	—	1	—	—	—	—	—
vermicelli	4	1	—	5	—	1	—	1	20
	36	4	—	40	—	—	—	—	—
	—	1	—	1	—	—	—	—	—
s	—	7	—	7	—	—	—	—	—
ts:—									
d prepared meat	12	—	—	12	—	—	—	—	—
	—	3	—	3	—	—	—	—	—
	1	10	—	11	—	1	—	1	9·0
cooked sausages	8	—	—	8	—	—	—	—	—
	16	4	—	20	—	—	—	—	—
lings	—	2	—	2	—	—	—	—	—
ffals, etc.)	21	1	—	22	—	—	—	—	—
	—	1	—	1	—	—	—	—	—
ated	—	8	—	8	—	—	—	—	—
ned condensed	—	27	—	27	—	—	—	—	—
condiment	—	6	—	6	—	—	—	—	—
	—	1	—	1	—	—	—	—	—
meal	26	3	1	30	—	1	1	2	6·7
r	—	3	—	3	—	—	—	—	—
	28	20	—	48	1	1	—	2	4·2
	—	3	—	3	—	—	—	—	—
	164	1	—	165	—	—	—	—	—
ce	—	1	—	1	—	—	—	—	—
	34	1	—	35	—	—	—	—	—
	3	—	—	3	—	—	—	—	—
	13	—	—	13	—	—	—	—	—
and mayonnaise	—	9	—	9	—	—	—	—	—
	—	7	—	7	—	—	—	—	—
read	—	1	—	1	—	—	—	—	—
than tomato)	1	38	—	39	—	—	—	—	—
o	—	10	—	10	—	—	—	—	—
	18	1	—	19	—	—	—	—	—
	2	3	—	5	2	2	—	4	80
	31	28	—	59	—	3	—	3	5·1
owder	1	4	—	5	—	—	—	—	—
	5	39	—	44	—	—	—	—	—
	—	10	—	10	—	—	—	—	—
d	22	1	—	23	1	—	—	1	4·3
	63	2	—	65	—	—	—	—	—
confectionery)	33	1	—	34	—	—	—	—	—
	10	—	—	10	1	—	—	1	10
	44	—	—	44	—	—	—	—	—
illed	1	—	—	1	—	—	—	—	—
t	40	2	—	42	—	—	—	—	—
	—	1	—	1	—	—	—	—	—
	—	2	—	2	—	—	—	—	—
otal foods*	2,124	1,370	2	3,496	94	59	2	155	4·4

* Not including 12 " appeal to cow " samples of milk.

Article	Number examined				Number adulterated or otherwise giving rise to irregularity			
	Formal	Informal	Private	Total	Formal	Informal	Private	Tota
Ammoniated tincture of quinine " B.P."	1	—	—	1	1	—	—	1
Aspirin tablets	3	3	—	6	—	—	—	—
Bicarbonate of soda	—	3	—	3	—	—	—	—
Borax and honey	—	1	—	1	—	—	—	—
Calamine lotion	—	1	—	1	—	—	—	—
Carminative medicine	—	1	—	1	—	—	—	—
Cascara tablets	2	—	—	2	—	—	—	—
Compound glycerine of thymol	—	3	—	3	—	—	—	—
Cough mixture	—	8	—	8	—	—	—	—
Easton's syrup	—	1	—	1	—	1	—	1
Epsom salts	3	1	—	4	—	—	—	—
Extract of malt	—	1	—	1	—	—	—	—
Extract of malt with cod liver oil	—	2	—	2	—	—	—	—
Fever mixture	—	1	—	1	—	—	—	—
Gee's linctus	1	2	—	3	1	1	—	2
Glauber's salt	6	—	—	6	—	—	—	—
Glucose	—	2	—	2	—	—	—	—
Glucose beverage	—	1	—	1	—	—	—	—
Glucose tablets	—	2	—	2	—	—	—	—
Glycerine	6	—	—	6	—	—	—	—
Herbal remedy	—	1	—	1	—	—	—	—
Indigestion tablets	—	1	—	1	—	—	—	—
Infant's cordial	1	—	—	1	1	—	—	1
Iron tablets	—	1	—	1	—	—	—	—
Liquid extract of cascara sagrada	—	1	—	1	—	—	—	—
Liquid paraffin	4	—	—	4	—	—	—	—
Medicated sweets	—	1	—	1	—	—	—	—
Milk of magnesia	—	1	—	1	—	—	—	—
Oil:—								
Camphorated	3	—	—	3	—	—	—	—
Castor	2	—	—	2	—	—	—	—
Cod liver	2	4	—	6	—	—	—	—
Eucalyptus	1	1	—	2	—	—	—	—
Neatsfoot	—	1	—	1	—	—	—	—
Olive..	3	6	—	9	—	1	—	1
Olive oil and raspberry vinegar	—	1	—	1	—	—	—	—
Parrish's chemical food	—	3	—	3	—	—	—	—
Proteolysed liver..	—	2	—	2	—	—	—	—
Raspberry vinegar	2	—	—	2	—	—	—	—
Rose hip syrup	—	4	—	4	—	—	—	—
Saline, effervescent	1	—	—	1	—	—	—	—
Syrup of figs	—	1	—	1	—	—	—	—
Syrup of squills	1	—	—	1	1	—	—	1
Sodium bicarbonate	1	—	—	1	—	—	—	—
Tincture of iodine	1	1	—	2	—	—	—	—
Zinc and castor oil ointment	—	1	—	1	—	1	—	1
Yeast tablets	—	2	—	2	—	—	—	—
Total drugs	44	66	—	110	4	4	—	8
Add total foods*.–	2,124	1,370	2	3,496	94	59	2	155
Total food and drugs* ..	2,168	1,436	2	3,606	98	63	2	163
All milk (including sterilized milk)*.. ..	850	728	—	1,578	81	37	—	118

* Not including 12 " appeal to cow " samples of milk.

Composition of milk

'he average values for the percentage content of fat and non-fatty solids he four quarters and for the whole year are set out in tabular form.

rterly average table

er	All milks				Genuine milks				Adulterated milks			
	No.	Non-fatty solids %	Fat %	Total solids %	No.	Non-fatty solids %	Fat %	Total solids %	No.	Non-fatty solids %	Fat %	Total solids %
..	407	8·70	3·50	12·20	371	8·76	3·55	12·31	36	8·10	3·00	11·10
..	391	8·73	3·42	12·15	347	8·78	3·50	12·28	44	8·28	2·80	11·08
..	427	8·76	3·61	12·37	402	8·80	3·64	12·44	25	8·30	3·00	11·30
..	353	8·78	3·78	12·56	340	8·80	3·81	12·61	13	8·25	2·99	11·24

ıal average table

'ear	All milks				Genuine milks				Adulterated milks			
	No.	Non-fatty solids %	Fat %	Total solids %	No.	Non-fatty solids %	Fat %	Total solids %	No.	Non-fatty solids %	Fat %	Total solids %
954	1,578	8·74	3·57	12·31	1,460	8·79	3·62	12·41	118	8·23	2·92	11·15

lteration of milk

Vhen the Society of Public Analysts was first formed in 1874, one of the problems which called for attention was to propose a standard for genuine , so that, from an analysis of a particular sample, an analyst could form pinion whether the milk had the same composition as when it came from cow.

Iundreds of thousands of samples had to be examined before it was safe tempt to fix a standard. The problem is so difficult that even to-day no legal standard for composition exists in this country. The Sale of Milk ılations, 1939 substantially repeat the requirements of the Sale of Milk ılations, 1901, whereby if a milk contains less than 3·0 per cent. of fat or than 8·5 per cent. of non-fatty solids the milk is to be presumed to be terated until the contrary is proved.

Vhile the onus of proving that any such milk has not been skimmed or red is laid upon the supplier, in actual practice it is usually the sampling ers and public analysts who provide such proof. Indeed the Act contains isions giving the supplier the right to have samples, the so-called "appeal-ow" samples, taken at a corresponding milking under supervision. It is esting to note here that in the five years 1950–54, 75 "appeal-to-cow" les have been examined in this laboratory, and 14 of them have fallen w the presumptive limit of 8·5 per cent. non-fatty solids. The freezing-ts of these samples were, however, normal for genuine milk. In the year er review, 103 samples (representing 6·5 per cent. of all milk samples) ained less than 8·5 per cent. of non-fatty solids, while at the same time reezing-point test showed the deficiencies to be due to natural causes.

Samples adjudged by the freezing-point test to be free from added water

The following samples of milk showed figures for non-fatty solids b the presumptive limit of 8·5 per cent. non-fatty solids fixed by the Sa Milk Regulations, 1939, but were adjudged genuine (apart from any defici in fat) on the Hortvet freezing-point test:—

Serial number	Total solids per cent.	Fat per cent.	Non-fatty solids per cent.	Freezing point °C. (Hortvet)	Acidit °Richm
1009c	11·03	2·70	8·33	—0·541	17
554B	11·02	3·10	7·92	—0·539	17
555B	11·30	3·25	8·05	—0·542	17
1072c	11·40	3·10	8·30	—0·543	17
1091c	11·10	3·00	8·10	—0·550	18
1092c	11·26	2·90	8·36	—0·548	18
1094c	10·91	2·80	8·11	—0·551	19
636B	11·58	3·20	8·38	—0·536	18
1150c	10·73	2·70	8·03	-0·543	17
1153c	11·08	2·60	8·48	—0·544	17
1154c	10·86	2·70	8·16	—0·546	17
1174c	11·08	2·80	8.28	—0·547	15
1175c	11·22	2:65	8·57	—0·553	16
1176c	10·95	2·60	8·35	—0·548	16
715B	11·02	2·95	8·07	—0·542	16
1251c	13·02	4·67	8·35	—0·536	20
1255c	11·86	3·37	8·49	—0·544	18
237A	11·67	3·30	8·37	—0·545	16
238A	11·41	3·25	8·16	—0·539	15
760B	11·43	3·30	8·13	—0·546	18
761B	11·30	3·35	7·95	—0·550	19
762B	10·82	2·60	8·22	—0·541	16
736B	10·68	2·60	8·08	—0·544	16
257A	11·30	3·25	8·05	—0·540	18
258A	12·03	3·60	8·43	—0·542	16
259A	11·38	3·40	7·98	—0·537	14
260A	11·42	3·20	8·22	—0·540	15
261A	12·70	4·40	8·30	—0·541	19
1300c	11·57	3·30	8·27	—0·545	16
1302c	11·16	3·10	8·06	—0·539	16
1304c	11·38	3·10	8·28	—0·553	18
295A	11·16	3·10	8·06	—0·542	16
296A	10·85	2·75	8·10	—0·544	17
297A	11·44	3·10	8·34	—0·541	17
298A	10·62	2·60	8·02	—0·547	16
320A	12·25	4·00	8·25	—0·556	19
321A	11·39	2·90	8·49	—0·555	17
322A	11·11	2·90	8·21	—0·543	18
323A	11·07	2·90	8·17	—0·542	18
324A	11·06	3·00	8·06	—0·537	16
325A	11·30	2·95	8·35	—0·553	16
326A	10·94	3·00	7·94	—0·540	16
327A	10·78	2·65	8·13	—0·547	18
1337c	11·96	3·80	8·16	—0·549	17
1338c	12·38	4·00	8·38	—0·551	16
1339c	10·72	2·60	8·12	—0·542	17
1340c	11·29	3·00	8·29	—0·544	18
1341c	10·62	2·50	8·12	—0·540	16
864B	11·40	3·00	8·40	—0·544	17
866B	11·10	2·70	8·40	—0·547	17
1365c	11·05	3·00	8·05	—0·545	18
1366c	11·23	3·00	8·23	—0·543	18
1367c	10·99	2·95	8·04	—0·531	17
1406c	11·58	3·30	8·28	—0·544	16
1407c	10·80	2·65	8·15	—0·534	16
1409c	10·94	2·50	8·44	—0·541	17
932B	11·57	3·30	8·27	—0·544	16
933B	11·13	3·00	8·13	—0·544	16
530A	11·12	2·70	8·42	—0·543	17
535A	11·14	2·70	8·44	—0·549	17
536A	10·96	2·60	8·36	—0·546	17
1013B	12·31	4·10	8·21	—0·551	15
1040B	11·26	2·80	8·46	—0·532	16
1530c	12·24	3·80	8·44	—0·548	15
1534c	11·22	2·80	8·42	—0·545	14
1535c	10·97	2·60	8·37	—0·546	14
1536c	11·13	2·65	8·48	—0·545	15
1088B	12·00	3·80	8·20	—0·540	16
1089B	11·01	2·55	8·46	—0·536	16
598A	11·40	3·00	8·40	—0·542	16
1592c	11·06	2·70	8·36	—0·541	17
639A	11·67	3·45	8·22	—0·532	18
1627c	11·41	3·10	8·31	—0·545	16
1628c	11·01	2·95	8·06	—0·545	16
1629c	11·45	3·10	8·35	—0·543	15
1127B	12·36	3·90	8·46	—0·543	19
741A	11·59	3·20	8·39	-0·545	18
1753c	11·79	3·40	8·39	—0·552	16

l er	Total solids per cent.	Fat per cent.	Non-fatty solids per cent.	Freezing point °C. (Hortvet)	Acidity °Richmond
	11·41	3·10	8·31	—0·551	18
	11·90	4·10	7·80	—0·539	24
	12·34	4·45	7·89	—0·542	14
	11·35	3·00	8·35	—0·545	17
	12·03	4·10	7·93	—0·556	15
	12·17	4·10	8·07	—0·555	16
	11·00	2·90	8·10	—0·543	17
	11·66	3·55	8·11	—0·543	15
	12·66	4·20	8·46	—0·538	16
	12·06	3·60	8·46	—0·566	23
	11·46	3·20	8·26	—0·557	16
	11·45	3·05	8·40	—0·537	17
	11·40	3·05	8·35	—0·537	18
	12·43	4·05	8·38	—0·558	16
	11·72	3·50	8·22	—0·537	17
	11·35	3·40	7·95	—0·539	17
	11·45	3·25	8·20	—0·541	17
	12·32	3·90	8·42	—0·537	15
	11·97	3·50	8·47	—0·537	15
	11·22	3·10	8·12	—0·529	15
	11·45	3·10	8·35	—0·536	15
	11·76	3·40	8·36	—0·536	15
	11·71	3·35	8·36	—0·533	15
	12·66	4·20	8·46	—0·546	14
	11·22	2·90	8·32	—0·545	14
to c	ow" samples:				
	11·30	3·20	8·10	—0·546	16
	11·14	3·00	8·14	—0·542	16

uring the five years 1950–54, out of a total of 7,399 samples of milk ined, 446 (or 6·4 per cent) were deficient in non-fatty solids but were e same time adjudged genuine on the freezing-point test. Thus it may be said that the regular use of the freezing-point test has led to a fairer sment of sub-standard samples of milk, and samples which might have lawfully (though in fact erroneously) presumed to be watered have been n to be naturally poor.

d water

the current year 50 samples contained added water, the amount varying a trace to 15.0 per cent., and these samples represented 3·2 per cent. e number of milk samples received. In several instances more than one le was taken in testing the output of one supplier. Thus a farmer was on each of seven summonses, referring to seven samples taken from one consignment.

leficiency

f the above 50 watered samples seven were also deficient in fat. Seventy les in all were deficient in fat, but in the very great majority of these instances iencies were found in samples representing individual churns from a ignment of several churns, and the overall average fat content of the whole ignment was satisfactory.

[Legal proceedings were instituted in respect of 20 samples, and magistrates inflicted penalties in every instance. The total amount of fines was £26 10s. and of costs £18 1s. 2d. In other cases it was deemed appropriate to administer cautions.]

lteration of food (other than milk) and drugs

the table which follows immediately are set out the samples found to lulterated or unsatisfactory, and in summarized form the nature of any quent action taken in respect of each such sample.

ollowing the table are detailed notes on matters of analytical interest ng from the examination of these samples.

Samples other than milk

Adulterated and other unsatisfactory samples and action taken

Informal samples						Article	Formal samples									
													Legal proceedings			
Adulterated or unsatisfactory	Cautioned	Formal samples obtained	Formal samples unobtainable	Action taken under the Unsound Food Clauses	Referred for action to appropriate authority (a)		Adulterated or unsatisfactory	Cautioned	Legal proceedings ordered	Irregularity deemed too slight for further action	Referred for action to appropriate authority (a)	Pending	Summoned	Fined	Amount of fines	Amount of costs
															£ s. d.	£ s. d.
1	—	1	—	—	—	Alcoholic liquids (see also Ale (private) below)	2	1	—	—	—	1	—	—	—	—
3	3	—	—	—	2	Bread	—	—	—	—	—	—	—	—	—	—
1	1	—	—	—	—	Cakes, sweet	—	—	—	—	—	—	—	—	—	—
1	—	—	—	1	—	Canned orange juice	—	—	—	—	—	—	—	—	—	—
1	1	—	—	—	—	Cheese	—	—	—	—	—	—	—	—	—	—
1	1	—	—	—	—	Christmas pudding	—	—	—	—	—	—	—	—	—	—
1	—	—	—	—	1	Dried fruits	1	1	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Dried pulses	2	2	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Fish paste	3	—	1	—	—	—	1	1	5 0 0	—
1	1	—	—	—	—	Flavouring	—	—	—	—	—	—	—	—	—	—
2	1	—	—	—	—	Fruit juice	—	—	—	—	—	—	—	—	—	—
1	—	—	—	—	1	Meat products	—	—	—	—	—	—	—	—	—	—
3	2	—	—	—	—	Mineral waters	—	—	—	—	—	—	—	—	—	—
1	—	—	—	1	1	Oats (breakfast)	—	—	—	—	—	—	—	—	—	—
1	1	—	—	—	—	Pickles	1	1	—	—	—	—	—	—	—	—
2	—	2	—	—	—	Shrimps	2	1	—	—	1	—	—	—	—	—
1	1	—	—	—	—	Soups	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Suet, shredded	1	—	—	1	—	—	—	—	—	—
—	—	—	—	—	—	Tapioca	1	1	—	—	—	—	—	—	—	—
1	1	—	—	—	—	Vermicelli		—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Ammoniated tincture of quinine	1	1	—	—	—	—	—	—	—	—
1	1	—	—	—	—	Easton's syrup	—	—	—	—	—	—	—	—	—	—
1	—	—	—	—	—	Gee's linctus (compound linctus of squill)	1	1	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Infants' cordial	1	—	—	—	1	—	—	—	—	—
1	1	—	—	—	—	Oil, olive	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Syrup of squills	1	1	—	—	—	—	—	—	—	—
1	—	—	1	—	—	Zinc and castor oil ointment	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	Ale (private sample). Certificate issued and appropriate authority notified (a)	—	—	—	—	—	—	—	—	—	—

e notes on particular cases of adulteration or irregularity

ı order to assist cross reference between the following notes and the mmary of samples examined," each sample is introduced by the heading r which it was classified in that table and then the name under which it submitted is also given.

lcoholic liquids — spirits (gin, informal). A private purchaser, suspecting gin he bought at a bar was weak, took a small sample and made a complaint e Health Department. On analysis the sample was found to have an alcoholic gth of only 42° (42 per cent. proof spirit). This strength is equivalent mixture of 64 parts of a spirit of 65° proof with 36 parts of water, and the gth of the consumer's own sample was thus in agreement with his complaint.

[A formal sample obtained soon afterwards, from the bottle in use for serving at the same bar, proved to be of full normal strength.]

lcoholic liquids — spirits (gin, formal). To investigate an unrelated complaint, ling officers entered a bar, and procured samples of gin and whisky out e opened bottles from which customers were being served. The whisky ound to be genuine. The strength of the sample of gin was found to be proof (63·1 per cent. proof spirit). This strength corresponds to a ıre of 97·1 parts of gin of 65° proof with 2·9 parts of water.

[The vendors were cautioned, and after an interval further samples were obtained. These samples were found to be genuine.]

holic liquids — spirits (orange gin, formal). The bottle from which this le was drawn by the sampling officer had a label bearing the name of a of distillers and a trade mark and also the descriptive words "Orange ' and the statement " 60° Proof." The following were the results of sis: Proof spirit, 60·9 per cent. by volume (i.e. 60·9° proof); total solids, er cent. weight/volume. The total solids included: sucrose, 7·5 per cent. sample, weight/volume; and acidity expressed as citric acid, 0·2 per cent. roduct had a flavour of orange. The composition agreed with what could tained by mixing gin of, say, 80° proof with a proportion of an " orange al."

ius it had been established that the statement of alcoholic strength was and it was considered that the description " orange gin " was reasonably ctory.

t the same time this product was widely advertised in the press, with nizable illustrations of the label, as " full strength gin made with oranges." pinion was expressed that the description " full strength gin " was not and a certificate of analysis was issued.

[The Town Clerk's Department gave consideration to the circumstances. Correspondence ensued with the firm concerned who intimated that use of the particular advertisement had ceased.]

lcoholic liquids — others (ale, private). A man purchased at a public-house " on " and " off " licences) two crown-corked half-pint bottles of wn ale." When he opened the first at home he was convinced from the rance and taste that the ale was very weak. He then opened the other and the contents seemed to him similarly weak. He brought the remaining nts of both bottles personally and asked for an analysis. The contents of vo bottles were combined and treated as one sample. On analysis the olic strength was found to be 1·88° proof with a specific gravity of 5. Assuming an " original gravity " of not less than 1·030, it was calculated he sample contained at least 60 per cent. of added water. An official certificate under the Food and Drugs Act was accordingly issued. It is known whether any legal steps were taken by the person submitting the sar but it is thought to be unlikely.

> [The circumstances were reported to the Excise officer for the dis It is understood that he caused samples of the same brand of ale examined elsewhere, and that the strength of those samples was f to be satisfactory.]

Bread (portion of loaf, informal complaint). The sample consisted of end of a white loaf, the portion submitted being of such a shape as w remain if a loaf had been sliced normally until about three-quarters of it been used. The portion was about two inches thick. The point of a n slightly protruded from the cut surface of the bread, and the end of the n near the eye could just be seen flush with the crust forming the end of the The portion of the " crumb " of the loaf very near to the position o needle was cut out and examined together with the needle. Judging fron manner in which portions of crumb had become brown and had adher the needle (forming the pattern of the crumb upon the needle) the opi was expressed that the needle must have been present in the dough and have been baked in the bread. The needle was a stout sewing needle tw three-sixteenths inches long and about one thirty-second of an inch t The eye was about three-sixteenths of an inch long.

> [The loaf was sold in the City, but had been baked in an adjo area. The bakers were cautioned and the medical officer of healt the area was notified.]

Bread (sliced loaf, informal complaint). Adhering to the end crust v dark greyish mass measuring about half an inch by three-eighths of an and consisting largely of soiled cotton fibres. A much smaller mass of si composition adhered to the edge of one of the slices.

> [The baker was visited and cautioned. Later a formal sample taken and found to be satisfactory.]

Bread, fancy (tea-cake, informal complaint). A small part of a cake of f bread, in a dry and brittle condition when submitted, showed a blackish on a broken interior surface. The darkened bread in the stained portion o sample was shown to be much richer in iron than the unstained port In fact the stained part had 180 parts of iron per million parts while unstained part had only 17. This finding supported by microscopical exar tion was the basis of an opinion that during preparation the dough had contaminated with dirty matter from machinery.

> [The bakers, whose premises were outside this City, were cautic and the facts were reported to the medical officer of health concerne

Canned fruit juice (orange juice, informal). A sample was submitted ir original can which, on opening, was found to be internally lacquered ove cylindrical surface and at one end, but not at the other end. The unlacqu end was stripped of tin. There were many pinholes in the lacquer, and t were small areas where the tinplate had been attacked through the lac The contents had a somewhat astringent metallic taste. On analysis the follo results were obtained:— tin, 350 parts per million; iron, 80 parts per mil The Food Standards Committee of the Ministry of Food recommen (January, 1953) a limit of 250 parts per million of tin in foodstuffs. The met taste would be mainly attributable to its iron content. The sample was rega as unfit for human consumption and it was recommended that any fur stocks of the batch of the product should be inspected.

> [Action taken under " unsound food " clauses of the Food Drugs Act. The remaining stock was voluntarily surrendered.]

real soup mixture (informal). This sample consisted of a cellophane bag
s contents, purchased by retail. The only declaration of the composition
contents was printed upon a paper slip placed inside the bag so as to be
through the cellophane, and the words were " Cereal soup mixture."
ontents were found to be:— dried peas, dried small white beans, yellow
eas, green split peas, lentils, rice, barley and small tapioca. An apparent
h of the Labelling of Food Order, 1953, was reported.

[Cautionary letters were sent to the packers and also to the wholesale dealers.]

heese (informal). This sample comprised a circular box containing six
rapped portions of processed cheese. On the lid of the box, and on
portion, the product was described by label as " Danish Cheese." On
is it was found to contain 52·8 per cent. of moisture and only 17·5 per
of fat, corresponding to only 37 per cent. of fat in the dry matter. The
on was expressed therefore that the product was made from a partially-
ned-milk cheese. It appeared also from the label that the product was
d in Denmark for an English dairy company. A request was made for
roduct to be sampled formally, but no more could be found.

[A cautionary letter was sent to the importers and to the wholesale dealers. The importers sent information that their contract was for a processed cheese made from a blend of named Danish cheeses. These had been presumed to be full-cream cheeses, but it was learned on further enquiry that, in fact, one brand of cheese was sold in Denmark without specification for fat.]

hristmas pudding (informal). A certain brand of pre-packed Christmas
ing was displayed for sale bearing a label having a statement of ingredients
llows: " Vine fruits, spices, sugar, flour, fat, peel, rusk and salt."
ar earlier the makers of the same brand agreed that " spices "
d come later in the list, probably between " rusk " and " salt ";
they further agreed with the Manchester Food and Drugs Authority
se duty it is to enforce the Labelling of Food Order) to amend
labels accordingly. (The Labelling of Food Order, 1953, like its prede-
rs, requires that " the ingredients shall be specified in the order of the
rtion in which they were used, the ingredient used in the greatest
rtion being specified first ").

[The manufacturers reaffirmed their intention not to use the old label, and in fact had withdrawn from sale all packages bearing that label before the sampling officer made his enquiries relating to the above sample.]

d fruits — vine fruits (sultanas, formal). The sample consisted of about
unces of dried fruit which appeared to be on the whole clean and sound.
ample was found to contain a small living beetle (brown, about one-eighth
inch long), a living larvae (white, about one-eighth of an inch long,) a
ar but dead larvae, and some minute insect parts. The beetle was identified
r. Shaw of the Department of Entomology, Manchester Museum, as a
non infestant of stored products, Henoticus Californicus.

[The vendor agreed to withdraw the remaining stock from sale. No other stocks derived from the same consignment were traceable.]

ried fruits — others (mixed cut peel, informal). This sample was submitted
e container in which it had been sold, a cup-shaped waxed carton bearing
ed matter including " net weight 4 oz." It consisted of crystallized lemon
range peel of normal composition, but the contents of the carton weighed
3·3 ounces.

[The facts were reported to the Weights and Measures Department.]

Dried pulses (beans, formal). The beans showed clear evidence of ins attack, varying from surface damage to complete disintegration. T proportion of damaged beans was 14 per cent. of the sample. Two very sn unidentified beetle-like insects and some insect-parts were found. The sam was regarded as unsatisfactory, even after allowance had been made for fact that such a foodstuff could only be eaten after prolonged boiling. inspection of any further stocks was recommended.

> [The vendor withdrew the remaining stock from sale. A quan had been in the shop for several months and no other parts of the sa consignment were then traceable through the wholesaler.]

Dried pulses (peas, formal). There were many signs of insect attack u the peas; many peas were partly eaten away, or bored, or discoloured (be brownish instead of the normal greenish-grey). No insects or parts of ins were found. The proportion of peas considered to be totally spoiled 8 per cent. of the sample. A further proportion, 18 per cent. of the sam was attacked or discoloured to a smaller extent. These results were conside to warrant an inspection of any further stocks.

> [A small remaining stock was withdrawn from sale by the vend No further stock of the same batch remained at the wholesale warehou

Fish paste (three formal samples). The first two of these samples b represented the product of the same manufacturing company. The fish p was an " open " product, made in rectangular enamel dishes in which it delivered at shops and from which it was there weighed out to the re customer's requirements. The Food Standards (Fish Paste) Order requi the presence of not less than 70 per cent. of fish. After analysis the samp were certified to contain not more than 50 per cent. of fish. The sampl officer accordingly procured a further formal sample of fish paste in course delivery from the makers to the vendor. This proved to have almost exac the same composition as before, and was accordingly certified to be simil below standard.

> [The manufacturers pleaded that the only fish present was can salmon, and produced analyses to show that a one-pound can contai (contrary to their original assumption) less than one pound of fi (Water is added for the purposes of normal canning.) They furt pleaded that the product as sold was good value at the price. They w fined a total of £5.]

Flavouring (lemon, informal). This informal sample consisted of a yell oily fluid contained in a nominally one-ounce bottle bearing the manufactur label. The liquid had a strong lemon-like flavour and aroma. On anal the sample was found to contain at least 70 per cent. by volume of a min oil of the quality of medicinal liquid paraffin. Thus it appeared that preparation or sale of this product would be a contravention of the Min Oil in Food Order, 1949.

> [No further bottles similar to the sample were found by the sampl officer in the retailer's stock. By means of a batch number, the ma facturers demonstrated that the article had been packed before the d of the Mineral Oil in Food Order. An assurance was given that flavourings contravening the Order would be made or supplied.]

Flour confectionery (cake, informal complaint). The sample was acco panied by a small flattish splinter of glass nearly a quarter of an inch long, s by a complainant to have been found in the cake. The sample itself consist of a circular flat sponge sandwich cake (" cream sponge ") from which ab one-third had been removed by cutting to the centre in the normal way. T sample was examined for foreign particles, particularly glass, and none w found.

> [Inspection at the bakery failed to account for the glass splinter.]

uit juice (informal). A sample consisted of an orange coloured cloudy contained in a one-third pint bottle resembling a milk bottle, but having led upon the glass the words " Morning Fruit Juice." The same words impressed upon the metal cap. The contents were found to resemble a -diluted fruit juice, and the amount was found to be insufficient for an ded analysis. Accordingly a larger sample was requested, and six similar es were submitted as one sample. The contents were mixed in the atory, and on analysis the sample was found to contain:— Total solids, er cent.; acidity (as citric acid), 0.21 per cent.; sucrose, 6·0 per cent.; ing sugars (as invert), 0·5 per cent ; saccharin, 0·007 per cent ; phorus (P), 0·001 per cent.; potassium (K), 0·014 per cent.; total gen (N), 0·006 per cent.; vitamin C, less than 0·9 milligramme per nillilitres; sulphur dioxide, 20 parts per million. Microscopic examination ed fragments of tissues of a citrus fruit. The liquid had a flavour of orange. opinion was expressed that the sample was a soft drink complying as to osition with the requirements of the Food Standards (Soft Drinks) r, 1953, for a " soft drink for consumption without dilution " (Schedule, I). The sample was not a fruit juice as such, but a fruit drink in which ruit juice had been diluted at least tenfold, and sweetened with added and saccharin. Much of the natural vitamin C had been lost at some in the preparation. (No claim was made for the presence of vitamin C.) presence of sulphur dioxide strongly suggested that the drink was not entirely from fresh oranges. It appeared in the circumstances that the iption " fruit juice " could be misleading.

[The manufacturer was cautioned and agreed to alter the wording on the caps, and, pending the ordering of new bottles, to cover the wording on the existing bottles with adhesive labels bearing amended wording.]

lacaroni and vermicelli (vermicelli, informal). A sample was procured by hasing a quantity from a small bulk displayed with a card marked rmicelli." The material consisted of brown cylindrical shapes, about millimetre in diameter and two to four millimetres long, made of chocolate, as might be used for a cake-decoration. On enquiry, the sampling officer tained that the manufacturer labelled the article " chocolate vermicelli," that the retailer was responsible for omitting the word " chocolate " on display. The sample was therefore classified as " incorrectly described," n the particular circumstances there seemed to be little risk of misleading purchaser.

[The retailer was verbally cautioned.]

leat products (meat pies, informal complaint). A complainant stated that neat in the pie filling contained an undue proportion of gristle. As a result visual inspection in the laboratory of the contents of two pies, the opinion expressed that there was some justification for the complaint. An inspection ne ingredients of pies at the place of manufacture was recommended.

[An investigation revealed that the gristle had been introduced inadvertently. The manufacturer was cautioned.]

Dats and oatmeal (rolled oats, private). A consumer submitted a carton contents of which had been partly used, and also certain specimens which aid he had found in the oats. The remaining oats in the carton were found examination to contain a living beetle, recognized as a larder beetle nestes lardarius), and three cast larval skins. The consumer's own findings the oats were numerically the same, one beetle and three larval skins, all the same species. The consumer had already indicated that he did not to take any further action himself.

[Remaining stocks in the shop were examined and found to be free from infestation.]

Oats and oatmeal (rolled oats, informal). The sample was submitted as result of a purchaser's written complaint that particles of foreign matter fou in the oats resembled mouse droppings. The sample was accompanied by match-box containing the particles referred to by the complainant. T particles in the match-box consisted of blackish flakes not very different size from flakes of actual rolled oats. From a microscopical examination these particles the opinion was stated that excrement of rodents was prese among them. The flattened form of the particles suggested that they had be rolled with the oats. The sample of rolled oats weighed about two ounces a consisted of the unused portion of the contents of a carton of a proprieta brand of rolled oats. The carton had, of course, been damaged in openi but showed no damage suggestive of rodent attack. A search among t oats revealed one further blackish flake which consisted of rodent excreme

> [The matter was then referred for action under the unsound fo clauses of the Food and Drugs Act. A very searching examination cartons from the same batch led to the submission to this laboratory all the suspected particles from a total of seven-and-a-half pounds of oa The greater part of these particles was found to consist of oats darken by overheating or by accidental contamination with some other da coloured matter, together with a few husks of weed-seeds, etc. O flattened particle was recognised microscopically as rodent excreme The packers were cautioned and information was sent to the medi officer of health of the area in which the oats were processed and packe

Pickles (pickled onions, formal). The original pickle jars from which t sample was obtained bore labels having the following declaration of ing dients:— Onions, caramel, solution of acetic acid, salt, spices, malt vineg After an examination of the whole sample, and an analysis of the fluid portio it appeared that the ingredients should have been stated in the follow order:— Onions, malt vinegar, acetic acid, salt, spices, caramel.

> [The manufacturer was cautioned and advised to label his product accordance with the Labelling of Food Order.]

Pickles (pickled red cabbage, informal). This sample was submitted in packer's original container, a glass pickle jar with a metal lid lined wit waterproof disc. The lid was secured by a "quarter-turn." It was observ before opening the jar in the laboratory that the contents had been leak to some extent between the jar and the lid. On opening, the liquid in wh the red cabbage was immersed was seen to be liberating some bubbles of g and a faintly disagreeable smell was observed. The liquor was tested acidity with the following results:— Acidity as acetic acid, 1·74 per cent. appeared that the product was undergoing fermentation, and that the condit was attributable to an insufficiency of acetic acid. The sample was regarded unfit for consumption.

> [Remaining stocks in the shop were withdrawn from sale.]

Shrimps (informal and formal). While a sample submitted as "salm and shrimp paste" was being examined for total fish content, the sampl officer was requested to purchase, for analysis and comparison, an infor sample of shrimps as commonly sold ("loose" not "potted"). When sample was examined, it was discovered, incidentally, that it contained bo acid. This well-known preservative was formerly commonly used in shrim but is now no longer permitted under the Public Health (Preservatives, e in Food) Regulations. The amount found was only 0·14 per cent. (as H_3B At this level, boric acid would be almost entirely ineffective as a preservati A further informal sample from the same retail source contained 0·16 per c boric acid, confirming the previous finding that only an inexplicably sn

ortion of preservative was present. At this stage it was deemed advisable
ocure a formal sample of shrimps from the same retail source, so that if
sary an official investigation could rest on a stronger foundation. The
al sample was found to contain only 0·11 per cent. of boric acid, and this
was duly certified. On investigation the sampling officer found that the
ps were prepared by a trader in the City who imported shrimps in barrels
a European country. The sampling officer took a sample from an unopened
l, the sample consisting of shrimps and some of the brine liquor in which
were packed. The percentages of boric acid in the drained shrimps and
e liquor were 0·33 and 0·29 respectively. It appeared from enquiries that
s the custom of the importer to drain away the brine and to wash the
ed shrimps with water to reduce the saltiness to a level that might be
table to a consumer. The effect of this washing was to reduce the boric
from 0·33 per cent. (an effective preservative dose) to something like
to 0·16 as noted above.

[The retail vendor and the importer were cautioned. It was pointed out to the importer that the legal responsibility for a breach of the Preservatives Regulations would rest upon him. He claimed already to have warned his European exporter that boric acid was prohibited in England, and it was later explained that the shrimps in question were intended for consumption on the Continent and were shipped to England by mistake.]

oft drinks (soda water, informal). The current Food Standards (Soft
ks) Order, 1953, like its predecessors, requires that the proportion of
m bicarbonate $NaHCO^3$ in soda-water shall be not less than 5 grains
int, and this is equivalent to 0·057 per cent. A small bottle of a certain
d of soda water appeared on analysis to contain far less than the standard
tity of soda, and because the solution was so weak a much larger sample
desirable. This difficulty was overcome by the submission of more bottles
e same brand of soda-water. The proportion of sodium bicarbonate was
d to be only 0·007 per cent., equivalent to about 0·6 grains per pint.

[The manufacturers were cautioned, after their admission that the requirements of the Food Standards (Soft Drinks) Order had been overlooked during a period of a few months.]

oft drinks (brewed ginger beer, informal). This sample was submitted in
original bottle bearing the manufacturer's label. On the label the product
described as " Brewed Ginger Beer." On analysis the following results
obtained: Total solids, 0·76 per cent. wt./vol.; proof spirit, 2·6 per cent.
/vol. Ginger beer is specifically referred to in the Food Standards (Soft
ks) Order, 1953, as being a drink to which the Standards Order applies,
Part I of the Schedule requires that 18 ounces of sugar shall be added
0 gallons of the ginger beer. 18 ounces in 10 gallons is equivalent to 1·12 per
. wt./vol. A footnote to the Schedule of the Order reads as follows:
the case of any soft drink referred to in the above table which is subjected
rewing in the course of its manufacture allowance shall be made, in assessing
minimum quantity of added sugar therein, for any change in sugar content
to chemical action during such brewing." By calculation it may be shown
during the production of 2·6 per cent. of proof spirit in a liquor by
entation, 2·2 per cent. of cane sugar would disappear. Allowing for this,
sample more than satisfied the requirements of the Order as to the quantity
sugar. It may be stated in general terms, however, that drinks con-
ing more than 2·0 per cent. of proof spirit can only lawfully be sold on
nsed premises, and it would be for H.M. Excise Department to enforce the
t of alcohol in brewed " soft drinks."

[During preliminary enquiries the sampling officer mentioned t ginger-beer brewers the apparent excess of alcohol, and he was sho letter from the excise officer granting a dispensation allowing the brew up to a strength of 2·5 per cent. proof spirit. Accordingl further action was taken.]

Suet, shredded (formal). This sample was found on analysis to co only 78·4 per cent. of fat, though the standard percentage of fat is 83· cent. as laid down in the Food Standards (Suet) Order, 1952. In view o possibility of segregation of some of the starchy filler and consequent vari in the fat content of the product both on packing and on sampling, a fu formal sample was procured and was found on analysis to satisfy the re ments of the Order.

Tapioca (formal). The sample consisted of small whitish pellet partially " gelatinized " starch, having in the mass a light buff colour. It found to consist entirely of sago starch. In this case the only irregularity the misdescription of the article, indicating the re-appearance of what has a rather too common error in the trade. Tapioca and sago are entirely diff in origin though similar in food value.

[The retailer was verbally cautioned.]

Drugs

Ammoniated tincture of quinine "*B.P.*" (formal). The 1948 edition o British Pharmacopœia omitted " ammoniated tincture of quinine," and 1949 onwards an article of the same composition has been included i British Pharmaceutical Codex. The sample complied with the formula, should have been marked " B.P.C."

[The retailer was informed and requested to label the pr correctly.]

Easton's syrup "*B.P.*" (informal). For similar reasons to those stated i preceding paragraph, this sample should have been marked " Easton's s B.P.C.", or simply " Easton's syrup." Its composition was correct.

[The retailer was informed and requested to label the pro correctly.]

Gee's linctus B.P.C. (informal and formal). An informal sample considered on analysis to be somewhat unsatisfactory, and a formal sa was requested. Both samples were examined in accordance with the met of assay given for this product in the British Pharmaceutical Codex. Re are given in comparison with the standards fixed by the B.P.C.:—

		Informal sample	*Formal sample*	*B.P.C. standards*
Weight per ml.	g.	1·160	1·162	1·175 to 1·1
Alcohol v/v	per cent.	23·4	23·4	17 to 19
Morphine, anhydrous w/v ..	per cent.	0·011	0·013	0·14 to 0·01

All the results for the samples lie somewhat outside the limits fixe the Codex. In themselves the figures for weight per millilitre and for alc have little importance, except as evidence of lack of precision in makin the mixture from its ingredients. The Codex fixes relatively wide limits fo small quantity of morphine required by the formula, yet in these sam the morphine found falls just below the lower limit. This again is evidenc failure to make up the mixture accurately.

[The packers were cautioned and urged to make the mixture str according to the B.P.C. formula, from products which themse complied with official requirements.]

Infants' cordial (formal). This product was sold openly to the public in a tle labelled with a printed label giving the name and address of the vendors,) were also the makers. The only directions for use were in these terms: o be taken in a little warm water, two or three times a day," and dosages e given for babies between one and twelve months old. Within a rectangle losed by a black line were the words: "Contains 0·018% Morphine w./v. ition:— It is dangerous to exceed the stated dose." On analysis the sample found to consist largely of sugar syrup with an admixture of compound ture of camphor (" paregoric "), a morphine-containing preparation. The ed percentage of morphine was found on analysis to be true. Because the cle contained less than 0·2 per cent. of morphine it would be exempt from provisions of the Dangerous Drugs Act. For the same reason it would excepted from the First Schedule of the Poisons Rules, and could be sold iout prescription. The labelling provisions of the Pharmacy and Poisons and Rules and of the Pharmacy and Medicines Act had been complied ı.

[From reports received by the Health Department, the sale of this " infants' cordial " was clearly a re-appearance of " soothing syrup," that well-known abuse at the beginning of the century whereby babies were " kept quiet " with a syrup containing a little laudanum. Since there appeared to be no actual breach of the laws enforceable by a Food and Drugs Authority, the Medical Officer of Health wrote to the Pharmaceutical Society. It is understood that the Society was able to take action to prevent " unethical conduct." Sale of the product having ceased, watch is to be kept to prevent any further offers for sale.]

Olive oil (informal). This sample was submitted in a bottle supplied and illed by the vendor. On submission the sample had a very cloudy appearance. examination the sample was found to contain 0·54 per cent. of water in form of droplets at the bottom of the oil or in suspension. The filtered complied with the requirements for olive oil B.P.

[It was found that a stock-bottle of oil visibly contained water. The vendor agreed to withdraw the oil from sale.]

Syrup of squills B.P. (formal). This sample was found on analysis to contain y 1·8 per cent. w./v. of anhydrous acid. A syrup of squills made in accorice with the formula given in the British Pharmacopœia 1948 would contain less than about 2·4 per cent. w./v. of anhydrous acetic acid. Though acetic d is not the principal active ingredient in this product it serves as an index the correctness of its preparation. The experience of the laboratory is that re may be a small loss of acetic acid on standing, but not sufficient to account the whole deficiency, which amounted to about one-quarter of the proper portion of acetic acid. When the current British Pharmacopœia came into ce in 1953, syrup of squills was listed in it as an article " deleted from the irmacopœia." Technically, therefore, at the time the sample was submitted re was no current B.P. standard for syrup of squills, and, if a pharmacist hed to use the pre-1953 formula, he should mark the article " B.P. 1948." me months later syrup of squills of the same composition as that of the '. 1948 was described in the new British Pharmaceutical Codex 1954.)

[The vendor was cautioned verbally, and he agreed to withdraw remaining stocks from sale.]

Zinc and castor oil ointment B.P.C. (informal). On analysis the follo results were obtained, figures calculated from the formula given in the Br Pharmaceutical Codex 1949 being given for comparison:—

		Sample	B.P.C. 1949 *form*
Zinc oxide, ZnO	per cent.	6·0	8·3
Unsaponifiable matter	per cent.	5·9	over 20

The sample was thus deficient in zinc oxide to the extent of 2·3 par zinc oxide per 100 parts of the sample, and had not been made up in accord with the formula as regards the basis of the ointment.

[A formal sample was requested, but afterwards, when the edition of the British Pharmaceutical Codex appeared, zinc and ca oil ointment was found to have been listed as "deleted," and the formula mentioned in the new B.P.C. was that of the British Pha copœia 1953, a formula quite different from that of the B.P.C. 1 Thus it had become impracticable to procure a corresponding fo sample.]

Notes on some drugs reported as " genuine "

Herbal remedy (informal). The medical officer of health of another autho requested an investigation of a proprietary product made in Manche The complaint was that the article as sold was accompanied by a leaflet rec mending it as a medicine for many disorders, and that a part of the le might be construed as a hint that the substance could be used as an abortefaci The product was a dark liquid in a bottle labelled with a quantitative staten of active ingredients, prominent among which was aloes, though extract many well-known herbs were also declared. On analysis, the presence of a was confirmed in an amount which would provide a maximal B.P. dos aloes on taking the recommended dose of the "herbal remedy." Aft lengthy analysis, the opinion was reported that the composition of the pro was compatible with the statement on the label. The wording on a le accompanying the sample purchased in Manchester was different from complained of, and in particular no suggestion of abortefacient prope could be inferred.

Proteolysed liver (informal). A complainant claimed to have observed a certain brand of proteolysed liver was of great benefit dietetically and ca a marked improvement of health, but that later batches of the same proprie product were comparatively ineffective; the definite complaint being that the later product was deficient in iron. The complaint was accompa by two unopened tins (having different code numbers) purporting to repre batches of the effective and ineffective products, and these were exami with the following results:—

		Batch A	*Batch B*	*Declaratio on label*
Total nitrogen (N)	per cent.	12·3	12·3	12·9
Moisture	per cent.	5·2	6·2	3·3
Ash	per cent.	4·3	4·6	5·2
Iron (Fe)	p.p.m.	240	250	230
Copper (Cu)	p.p.m.	45	55	40

(p.p.m.) = parts per million.

Having regard to the fact that the raw material (liver) is subject to nat variation in composition, the agreement between the composition of samples and that stated on the label was considered to be entirely satisfact In particular there was no evidence of lack of iron in either sample. complainant was recommended to seek further medical advice.

ood and Drugs Amendment Act, 1954

od Standards Orders have caused something like a revolution in the of public analysts' laboratories. Although before the last war, the 1938 arlier Food and Drugs Acts had provided powers whereby standards nposition for many foodstuffs could have been fixed by regulation, there eneral opposition to the idea except in a few cases where standards were onsidered to be demonstrably desirable in the interests of all parties.

ring the war years, food control, rationing and also considerations of health and nutrition made it of vital importance that certain new food rds should be imposed in such a way that they could be issued, withdrawn ied quickly. Special powers were therefore provided under the Emergency s (Defence) Acts and embodied in the Defence (Sale of Food) Regulations.

ese Regulations enabled the Minister of Food, whose appointment had been dictated by war-time necessity, to issue the series of Food rds Orders whose number has continued to increase up to the present When the Emergency Powers Acts themselves came to be repealed as untry reverted to peace-time methods of legislation, it was recognized e food standards were still serving too useful a purpose for them to be nly terminated, and the Defence (Sale of Food) Regulations were kept e by year-to-year legislation.

e Food and Drugs Amendment Act, which became law in November, leaves the Defence (Sale of Food) Regulations in force until the date ted by the Minister of Food for the commencement of the Amendment hen those Regulations are repealed. The Amendment Act itself confers s upon the Minister of Food to regulate the composition of food. Thus tention appears to be to leave no gap between the ending of the Food rds Orders under Defence Regulations and the commencement of new tions controlling the composition of food under the Amendment Act.

e actual powers to lay down new food standards, while similar to g powers, are in some respects different and on the whole wider. Thus is no precise indication at present whether, when the Amendment Act is ly in force, the food standards then operative will be identical with, or r to, or substantially different from those now having effect. But it is ely valuable that machinery is in existence to make possible the smooth enance of food standards in such a way that they may be revised at any f and when the need becomes obvious.

on the date of commencement of the Amendment Act, Section 6 of od and Drugs Act, 1938, a section now suspended by virtue of the ce Regulations, will come into force again automatically (with very slight lment). Section 6 of the 1938 Act makes it an offence to describe food gs incorrectly either in a label or advertisement.

would not be appropriate here to comment at much greater length upon t which has not yet come into operation. Brief mention may be made ections of the Amendment Act are designed to strengthen safeguards affect the hygienic quality of food and which restrict, in variety and nt, the addition of chemical substances (particularly new synthetic cals) to foodstuffs.

Food Standards (Margarine) Order, 1954

This Order laid down a standard for vitamin A in margarine, and pres an official method for carrying out the determination. After the instal of the necessary new apparatus (which included a spectrophotometer wave-length range including that of visible light and extending into the violet region, and also chromatographic columns made to certain dimen a period of experimental work followed and some minor difficulties overcome.

The routine examination of margarine for vitamin A was started in O and up to the end of the year ten samples of margarine were examin vitamin A in addition to the usual full chemical analysis. Eight samples complied with the vitamin A standard, namely 760 to 940 international of vitamin A, while two samples were found to approach the lower lin vitamin A very closely and were considered satisfactory.

Drinking water and other water samples

Manchester obtains its drinking water from two distinct sources, Thirlmere in the Lake District and from Longdendale, a few miles to th of the City. This latter supply is an upland surface water and is consequ liable to contain natural yellow colouring matters derived from peat covering the moors in the gathering grounds. Under normal condition yellow colour of Longdendale water is largely reduced during its standing in the reservoir system, but in periods of heavy rainfall there is insuf standing time in the reservoirs and coloured water enters the mains.

Such conditions prevailed for the greater part of the year and consequ the complaints about the quality of drinking water were almost en concerned with discoloured water. It must be admitted that in many the samples taken fully justified the complaints, the water being of a s yellow colour; but it is important to stress the fact that the colour, alth objectionable, does not render unfit to drink a water which is fully prot by chlorination.

The water samples examined during the year were made up as follows

Samples taken to investigate complaints .. ..
Routine examinations and checks on previous complaints .. ..
Miscellaneous samples: Drinking waters .. ..
Other waters .. ..

Total number of samples .. ..

Of the 32 complaints which resulted in samples being examined, 17 fully or partly justified. The remainder, including two complaints of " un taste," were not supported by the samples taken. Nine samples of th taken for routine examination or as checks on previous complaints were to be unsatisfactory in colour, sediment, or both.

The unusually high figure of 9 miscellaneous drinking waters and 10 sam of other waters entailed some interesting investigations. The 9 drinking w were made up as follows:— Two samples were specially collected from a l where previously the pH of the water was found to be lower than usual. of these was of the water first drawn after standing in the house pipes night, and this was examined for its lead content, while the other sampl used to determine the action of the water on bright lead sheet. The re showed that there was no likelihood of dangerous amounts of lead l up by the water. Seven samples were examined from the Langho Colony two from the Colony itself and five from a possible alternative source pply. In order to form a true assessment of the nature of this supply, es must be examined over a period of time and this work is still in ess.

ne samples of water other than drinking water all involved, directly or ctly, some aspect of public health.

n a large new housing estate in Manchester, trouble was encountered drains becoming blocked with material deposited from water percolating the brick-lined inspection manholes. At the request of the Housing tment, samples of the deposit, the percolate and the ground-water in the diate vicinity were examined, and the results proved the cause to be a errous iron content together with a high sulphate content of the ground-. The presence of sulphates enabled the water to attack the cement joints brickwork of the manholes and once percolation began then aerial tion caused the water to deposit its iron. The amount of material collecting bottom of the manholes in this way was surprisingly large. An important ibutory factor was the high level of the water-table in the ground in on to the manholes and drains. A visit to another Corporation housing and the examination of two further samples of ground water showed similar trouble could not arise at that site.

mples of the hot and cold water supplies in the operating theatres of two hes of a Manchester hospital were examined. The quality of the water eemed suitable for theatre use. A further sample of condensed steam the same hospital was found to be suitable for use as a hot water supply, igh some suggestions were made on the prevention of possible contamina-y atmospheric dust.

ne sample of water was taken from the River Dean, near Rainow, and its osition determined in order to assist work being done in the Zoological tment of Manchester University on the group of insects called ioptera."

ream and ice lollies

or a variety of reasons, the dietary habits of the general public change in ourse of time, and this is particularly evident in the case of ice cream. ne time the article was principally regarded as a summer luxury associated the holiday, on the beach or in the park, and was perhaps mostly consumed ildren. It is now available throughout the whole year, and is being singly consumed in canteens, cafes and restaurants, where it figures as a al part of the sweet course either alone or with fruit.

will be recalled that in the immediate post-war period, the first statutory to improve the quality of ice cream were directed towards hygienic ards, as instituted by the Ice Cream (Heat Treatment) Regulations, 1946. as supplies of ingredients improved, minimum standards of composition laid down in the Food Standards (Ice Cream) Orders. The Order of 1953 esent in force requires briefly that ice cream shall contain not less than cent. of edible fat, 10 per cent. of sugar, and 7½ per cent. of non-fatty solids. The fat customarily used in the manufacture of ice cream is an ent foodstuff resembling margarine fat. Would it not now be timely to duce a standard for a superior grade of ice cream, the fat of which should tirely butter fat ?

Seventeen samples of ice cream were examined during the year, a of them complied with the standards. The minimum fat content was 8 cent., the individual samples varying from 8·8 per cent. to 12·0 per with an average of 10·4 per cent.

A point may be mentioned in connection with the wrapping of ice l Until comparatively recently most lollies have been sold unwrapped. makers have deemed it to be an improvement to cover the edible portion what is usually a thin semi-transparent waterproof paper, frequently b some printed design and perhaps a brand name. The product then be a " pre-packed " food for the purposes of the Labelling of Food Order. so long as there is no specific food standards order for ice lollies, it is nec to print upon any such wrapper a declaration of ingredients in ord percentage. In particular, if saccharin should be one of the ingredie would be necessary to include it in the declaration.

In connection with the examination of six samples of wrapped lolli addition to the usual tests for metallic impurities, further analyses were to check the correctness of the declarations.

Samples submitted by various sections of the Health Department

(*a*) Investigation of suspected food-poisoning. Chemical analysi addition to any bacteriological examination that might have been done Regional Public Health Laboratory) was carried out on the following sam Two cans of rhubarb, one can each of peas and beans, one dried milk tea (prepared beverage), two specimens of sugar, one bottle of concent orange juice.

(*b*) Investigation of complaint: Ice cream was examined for m particles.

(c) Fourteen samples of margarine submitted with tenders were exan in relation to legal standards.

Samples submitted by other Corporation departments

(*a*) Parks Department. The duties of the Manchester County Bor under the Fertilizers and Feeding Stuffs Act have been delegated by the Council to the Parks Committee. Nine fertilizers have been submitted. were four compound fertilizers, two dried blood, one bone meal, one sul of ammonia, and one hydrated lime.

One compound fertilizer departed widely from the composition dec on the statutory statement submitted. Another compound was some deficient in potash only. One bone meal departed from the compos declared on the statutory statement but not, on the whole, to the prej of the purchaser. Infringements reported in two other samples were slight, and not to the prejudice of the purchaser.

(*b*) Markets Department. One specimen of powdered gelatine r senting a stock held for a long period was found to comply with recent stand

The skin of a plucked turkey was examined for added colouring matter negative results.

In collaboration with an inspector of the Markets Department a supplied in a restaurant was examined, and this laboratory is indebted t inspector for an opinion as to the identity of the fish.

(c) Weights and Measures Department. Three samples of liquid fly-sp were found to contain a solvent defined as " petroleum " for the purpos the Petroleum Act.

analytical investigation involved the detailed analysis of four samples ıd and one sample of dried egg. These samples were submitted as a of complaints received by the Weights and Measures Department that loaves were being sold at weights other than the weights required by ead Order, 1953. It was submitted on behalf of the seller of these loaves ıey were in fact " bun loaves " and were therefore excluded from the by definition. Because action upon the complaint may still be pending ılysis of the bread in question will not be given here. It may be of interest, er, to give the results of analysis of a sample of bread specially made purposes of the investigation according to a given formula, said to be ıowledged " bun loaf " formula. The specimen loaf A weighing 1lb. 12oz. ıde from the following formula : 5lb. sugar; 4lb. vegetable fat; 1½lb. gg; per 96lb. flour. The loaf B was an ordinary loaf of the same weight " national bread." The loaf A was found on analysis to contain much an 1 per cent. of sugar and probably less than ¼ per cent. of sugar se). The destruction of sugar by yeast-fermentation in the process of ing loaf A had thus been almost complete. This does not necessarily hat the sugar had served no purpose, for sugar would stimulate fermentation the early stages. It was concluded that no opinion could be formed he analysis of a bread made with yeast as to how much sugar was present raw materials of the bread. Results for fat and phosphorus were as s:—

	Loaf A	Loaf B
	Per cent.	*Per cent.*
	(calculated on dry matter)	
t (total fatty matter after acid-digestion of starch) ..	6·0	2·0
osphorus (P) (present in " lecithin " extractable by chloroform followed by alcohol)	0·011	0·002

e dried egg present in the ingredients of loaf A would contribute about r cent. of fat (calculated on the dry matter) to loaf A. The use of a little the preparation of loaf B seems to be indicated by the analysis, and of course, be quite permissible. Traces of lecithin-like substances sent in wheat-flour. Taking the difference between the phosphorus in and that in loaf B, namely 0·009 per cent., and multiplying by the imate factor 194 gives 1·7 per cent. of dried egg calculated on the dry , and this agrees with the original formula allowing for a normal moisture- t in the flour. From these results the inference was made that it was le by analysis to distinguish between bread as defined in the Bread and " bun loaf " made from the given formula.

es from other sources

Port of Manchester Health Authority. Specimens of imported food- were examined for the following purposes; for injurious metallic ities 8; for preservatives 5; for harmful colouring matters 3; for alum 1. ıtion of sodium fluoracetate rat poison was examined to determine its h in relation to specification.

Private firms submitted the following samples for general information elation to statutory requirements: lemon curd, butter, tea (dried leaf), ecimens of cola (soft drinks), canned fish for identification of included (the laboratory is indebted to the Department of Entomology, Manchester ım, for classifying the insect as a small rove-beetle), twelve cans of for an opinion as to quality (the laboratory is indebted to an inspector Markets Department who collaborated in the examination, and later ed responsibility for advising the owners of the stock of canned fruit its disposal).

(c) Private individuals submitted the following samples: crushed w for dietetic analysis, ear-drops in relation to prescription, common salt impurities, canned salmon for "glass" (actually crystalline magnes ammonium phosphate, or struvite), complete course from restaurant meal opinion as to significance of presence of fly in meat pie, "nut" said to been added to tea to annoy complainant (was myrobalans), tea (prep beverage, not connected with last-mentioned item) for harmful ingredient

Chemical examinations for H.M. Coroner

Evidence was given by the Public Analyst at two inquests. In the prepara of evidence, three specimens of organs or their contents, and five rel exhibits (tablets, etc.) were examined. In one case morphine was foun the gastric contents and in the other case phenobarbitone. The quantitie these drugs enabled the coroner to assess their importance in relation to cause of death, and he returned verdicts in one case of "misadventure" in the other of "natural causes."

Measurement of atmospheric pollution

To all whose work is in any way connected with the reduction of atmospl pollution, it is very encouraging to know that the public interest has aroused, and has manifested itself in various ways. In Parliament it is prop to grant powers to permit the establishment of smokeless zones in many urban areas. Medical research teams and botanical scientists are tryin understand the exact nature of the chemical poisons present in smoke, an way in which those poisons and the loss of daylight together reduce the vi of animal and vegetable tissues. The man in the street speaks freely of "sm and is beginning to learn that it will be vitally worth while to make a gr collective effort to reduce the dirt and danger.

Side by side with this direct approach goes another kind of contribu the gradual building up of available information as to the extent and distrib of pollution. The Corporation of Manchester has for many years supp the work of the Atmospheric Pollution Research organization of the De ment of Scientific and Industrial Research, by supplying the services of and the laboratory facilities necessary to carry out a series of measurem At monthly intervals results are sent to the Superintendent of Observa who collects similar data on a national scale.

A summary of the results for the year 1954 is given in tabular form, some other recent figures for comparison. The unpredictable changes of and weather cause wide periodical and random variations from month to m and year to year, and only a long term statistical examination of results is ca of sifting significant changes from chance fluctuations. This function is carried out by the Atmospheric Pollution Research organization and at inte of five years (interrupted by the last war) the results are published.

Volumetric apparatus for sulphur dioxide and smoke

Rusholme

	Daily average sulphur dioxide— parts per million					Daily average smoke— milligrammes per cubic metre				
	1954	1953	1952	1951	1950	**1954**	1953	1952	1951	1950
.. .. ..	0·183	0·211	0·169	0·144	0·164	0·422	0·488	0·393	0·368	0·353
y	0·159	0·153	0·203	0·086	0·118	0·327	0·326	0·442	0·230	0·264
.. .. ..	0·115	0·197	0·111	0·120	0·116	0·242	0·447	0·251	0·302	0·289
. .. .	0·105	0·089	0·103	0·062	0·082	0·221	0·180	0·208	0·228	0·277
. .. .	0·078	0·063	0·074	0·042	0·073	0·222	0·130	0·206	0·209	0·200
.. ..	0·049	0·068	0·067	0·028	0·043	0·151	0·159	0·167	0·171	0·115
.. ..	0·054	0·029	0·060	0·039	0·047	0·180	0·075	0·126	0·158	0·152
.. .. ..	0·057	0·046	0·052	0·046	0·035	0·225	0·123	0·161	0·164	0·180
ber	0·054	0·062	0·092	0·062	0·052	0·195	0·185	0·269	0·213	0·275
r	0·066	0·134	0·106	0·092	0·078	0·192	0·389	0·312	0·319	0·315
ber	0·129	0·088	0·182	0·101	0·165	0·349	0·241	0·539	0·214	0·525
ber	0·098	0·139	0·183	0·113	0·211	0·251	0·363	0·422	0·290	0·567
daily figure all year	0·10	0·11	0·12	0·08	0·10	0·25	0·26	0·29	0·24	0·29

e apparatus for these measurements requires daily attention, and is
d in the laboratory itself.

e sulphur dioxide content of the atmosphere recorded on 1st January,
namely, 0·798 parts per million, was the highest figure attained during
st six years; the smoke figure 2·055 milligrammes per cubic metre,
ed on the same day, was the highest since November 27th, 1950, when
ined the figure of 2·205 milligrammes per cubic metre. Such high
ings are invariably the result of foggy weather. The average of the daily
gs during the year compare favourably with those of previous years.

e lowest figure for smoke content, namely 0·053 milligrammes per cubic
, occurred on the 4th April. The lowest figure for sulphur dioxide was
parts per million recorded on the 18th and 19th October.

D.S.I.R. lead peroxide instrument

Sulphur pollution expressed as milligrammes SO_3 per 100 square centimetres exposed surface per day

	Monsall		Rusholme		Withing
	1954	1953	**1954**	1953	**1954**
January	5·56	7·51	3·94	4·29	2·66
February	5·59	4·85	3·84	3·75	3·08
March	4·51	5·53	2·58	3·64	1·99
April	3·17	3·50	2·38	2·35	1·41
May	2·92	2·74	2·17	1·53	1·24
June	2·62	2·19	1·37	1·84	0·75
July	2·79	2·52	1·47	1·07	0·75
August	2·39	2·78	1·32	1·22	0·88
September	3·64	3·28	1·34	1·38	0·86
October	5·32	4·55	1·80	2·33	1·07
November	5·49	6·00	2·77	2·14	1·97
December	5·04	5.40	2·58	3·20	1·56
Overall average	4·09	4·23	2·29	2·39	1·51

D.S.I.R. deposit gauge
Tons of deposit per square mile

Monthly averages

Station	Rainfall (inches)		Insoluble matter		Soluble matter		T s
	1954	1953	**1954**	1953	**1954**	1953	**1954**
Baguley	3·6	2·2	8·77	4·70	7·18	6·47	15·95
Booth Hall	4·0	2·6	12·49	8·72	8·56	6·46	21·05
Heaton Park	4·0	2·7	6·73	6·52	7·66	5·44	14·39
Monsall	3·7	2·4	10·72	11·09	9·98	7·53	20·70
Philips Park	3·8	2·6	23·91	16·70	13·16	10·26	37·07
Rusholme	3·9	2·4	12·87	12·15	9·50	7·40	22·37
Withington	3·5	2·2	10·23	10·57	7·48	5·28	17·71
Average for above gauges	3·8	2·4	11·38	10·06	8·67	6·98	20·05
Knowle House* (Handforth)	3·55	2·3	5·31	3·21	5·85	4·19	11·16

* This station is situated in Cheshire, outside the City boundary, and is about eight miles south from the City
Results are recorded for comparison.

MANCHESTER AND DISTRICT REGIONAL SMOKE ABATEMENT COMMITTEE

Honorary Secretary:—C. Metcalfe Brown, M.D., D.P.H., Barrister-at-Law

The Manchester and District Regional Smoke Abatement Committee is dvisory organization of local authorities in South Lancashire and North shire, covering an area of about 700 square miles. The Committee's assis- e is available to member authorities for technical and other problems erning all forms of atmospheric pollution.

A meeting of the Committee was held in Manchester in November, 1954, meetings of the Executive Committee took place in January, March and ember, 1954. At the meeting in November, 1954, the Committee adopted ed Rules as to Constitution. Suggestions by member authorities as to rol and other measures concerning atmospheric pollution were considered e Executive Committee and recommendations were embodied in a statement h was forwarded on 28th April, 1954 to the Secretary of the Committee on Pollution under the Chairmanship of Sir Hugh Beaver.

The extensive observations on atmospheric pollution undertaken by the onal Smoke Abatement Committee through two joint schemes of cipating authorities have been continued and observations have been menced in the areas of two additional member authorities, viz. the Borough eywood and the Urban District Council of Ramsbottom. Enquiries with w to participation have also been received from a number of other member orities.

The total number of apparatus now maintained by the Regional Smoke ement Committee in connection with the two joint schemes is as ws:—

	Local Authorities	Deposit gauge	Sulphur (Lead peroxide method)
Scheme No. 1	9	8	28
Scheme No. 2	26	4	50
Totals	35	12	78

A number of authorities continue to view with concern the building of new er stations and extension of others in the region, and it is likely that many tional observations on atmospheric pollution, particularly sulphur dioxide, need to be made.

Several requests for technical assistance have been dealt with by the mittee's officers during the year, the causes for complaint being special esses giving rise to atmospheric nuisances in each case.

The number of member authorities is 81. This is a reduction of one pared with the previous year and is due to the abolition of Limehurst Rural rict as from 1st April, 1954.

Investigation of atmospheric pollution—Carrington/Partington area

ESTIMATION OF SULPHUR DIOXIDE expressed as mgm. SO_3/day/100 cm^2 Batch A P
(louvred cover).

S_5=mean results May/September ; W_5=mean results November/March ; Y_{12}=yearly m
April/March.

SITE	Mean results for period 1948–53			1952–53			1953–54			1954–55	
	S_5	W_5	Y_{12}	S_5	W_4	Y_{11}	S_5	W_5	Y_{12}	S_5	W_5
Altrincham M.B.											
Wellington Road Secondary School	—	—	—	—	—	—	—	—	—	1·11	2·60
OldfieldBrow Primary School	—	—	—	—	—	—	—	—	—	1·17	2·62
Bowdon U.D.											
Towns Yard	—	—	—	—	—	—	—	—	—	0·65	1·76
Bucklow R.D.											
Ackers Farm	0·80	1·54	1·14	0·82	1·37	0·97	1·06	2·12	1·62	1·31	2·27
Moss Hall Farm	1·03	1·75	1·34	1·41	1·81	1·31	1·31	2·45	1·87	1·27	2·40
Green Lane Farm	0·68	1·40	0·99	0·67	1·49	0·92	0·82	1·91	1·36	0·74	1·84
Partington Gas Works	2·35	3·81	2·92	2·43	3·39	2·61	2·80	7·22	5·06	3·20	7·17
Bent Farm Warburton	0·63	1·25	0·89	0·52	1·22	0·74	0·58	1·50	1·02	0·64	1·66
Eccles M.B.											
Barton Airport	1·12	2·00	1·51	0·93	1·75	1·16	1·46	3·67	2·55	1·33	3·49
Sewage Works	—	—	—	—	—	—	—	4·80	—	1·78	4·30
Westwood Park	—	—	—	—	—	—	—	3·67	—	1·30	3·13
Hale U.D.											
Sewage Works	—	—	—	—	—	—	—	1·78	—	0·83	1·89
Irlam U.D.											
Princess Park	1·00	2·06	1·49	0·94	1·94	1·26	1·38	3·16	2·27	1·33	2·77
Railway View Farm	0·81	1·74	1·23	0·72	1·52	0·97	0·99	2·70	1·86	1·06	1·79
Sewage Works	0·92	1·55	1·20	0·80	1·35	0·97	1·12	2·47	1·78	1·16	2·54
Woodside Farm	0·61	1·21	0·88	0·61	1·19	0·82	0·76	2·05	1·41	0·80	1·91
Sale M.B.											
Grammar School	0·84	1·90	1·31	0·80	1·78	1·13	1·01	2·82	1·95	1·01	2·96
Highways Depot	0·86	2·04	1·38	0·86	2·23	1·33	1·12	2·70	1·93	1·21	2·48
Sewage Works	0·90	1·95	1·28	0·90	1·95	1·21	1·04	2·89	1·93	1·25	3·07
Stretford M.B.											
Victoria Park	1·01	2·22	1·55	0·95	1·96	1·26	1·19	3·33	2·26	1·45	3·33
Metrovick, Mosley Road ..	4·28	6·42	3·59	2·60	4·59	3·17	9·53	8·13	8·83	9·63	8·11
,, West Works.. ..	3·14	4·32	3·59	2·40	3·23	2·44	7·65	6·41	6·78	7·45	6·66
Urmston U.D.											
Bowfell Road	0·99	1·93	1·41	0·94	1·81	1·33	1·14	2·89	2·06	1·18	2·90
Irlam Road	0·68	1·57	1·08	0·63	1·42	0·97	0·74	2·13	1·44	0·85	2·19
Davyhulme Sewage Works ..	1·30	2·57	1·90	1·14	2·50	1·76	1·87	4·21	3·06	1·74	4·01
Westbourne Park	1·07	2·32	1·61	1·03	2·34	1·58	1·15	2·81	1·99	1·18	2·64
Barton Power Station	2·01	2·77	2·37	1·94	3·29	2·59	1·43	4·63	3·15	2·79	5·45
Means—all sites	1·29	2·30	1·65	1·14	2·10	1·45	1·90	3·43	2·67	1·83	3·26

Investigation of atmospheric pollution joint scheme No. 2

IMATION OF SULPHUR DIOXIDE expressed as mgm. SO_3/day/100 cm^2 Batch A PbO_2
(louvred cover)

mean results May/September ; W_5=mean results November/March ; Y_{12}=yearly mean
April/March.

SITE	MEANS									
	Winter—W_5				Summer—S_5			Year—Y_{12}		
	1951–52	1952–53	1953–54	1954–55	1952	1953	1954	1952–53	1953–54	1954–55
-under-Lyne M.B.										
ulance Depot, Lord Street	—	—	—	4·35	—	—	2·32	—	—	3·30
nere	—	—	—	2·66	—	—	1·62	—	—	2·12
head Pike	—	—	—	2·84	—	—	1·75	—	—	2·33
c Dingle	—	—	—	3·06	—	—	1·56	—	—	2·31
hurst Sewage Works	—	—	3·55	3·18	—	1·66	1·67	—	2·60	2·41
haw U.D.										
roft Hall	2·31	2·14	2·81	2·79	1·00	1·48	1·63	1·44	2·12	2·19
rton U.D.										
Birch Lane	—	2·08	2·83	2·63	0·82	1·22	1·24	1·41	2·02	1·92
nmar School	3·14	2·81	4·94	4·58	1·25	2·25	*2·55	1·83	3·70	3·53
on U.D.										
Bank	2·08	2·07	2·63	2·27	0·79	1·06	0·97	1·40	1·84	1·64
e Farm	2·42	2·22	3·38	2·92	1·18	1·92	*1·66	1·60	2·63	2·47
U.D.										
Hall	2·23	2·19	2·58	2·63	1·05	1·33	1·34	1·52	1·96	1·99
ge Works	1·76	1·62	2·00	1·76	0·77	0·97	0·97	1·13	1·47	1·37
den U.D.										
tery	2·84	2·58	3·66	3·25	1·28	1·67	1·91	1·80	2·65	2·60
ield M.B.										
nfield Park	2·42	2·29	3·09	2·75	1·06	1·24	1·28	1·59	2·13	2·00
rth U.D.										
ways Depot	2·64	2·60	3·57	3·10	1·18	2·09	2·24	1·74	2·90	2·69
rth M.B.										
ge Works	—	—	3·77	3·11	—	1·54	1·61	—	2·60	2·34
ways Depot	—	—	4·56	4·53	—	1·94	*2·12	—	3·41	3·41
od M.B.										
lopwood Avenue	—	—	—	3·21	—	—	1·40	—	—	2·31
n's Road Day Nursery	—	—	—	3·25	—	—	1·67	—	—	2·47
.B.										
House Yard	2·07	2·31	3·19	2·78	1·04	1·51	1·69	1·66	2·37	2·23
voir	2·13	1·76	2·59	2·37	1·04	1·45	1·45	1·36	1·98	1·76
.D.										
tery	2·00	1·67	2·25	2·16	0·85	1·04	1·11	1·21	1·65	1·62
rough U.D.										
ge Works	—	—	3·73	3·22	—	1·66	1·70	—	2·71	2·24
Barn Farm	—	—	3·64	2·80	—	1·50	1·45	—	2·55	2·34
ever U.D.										
et Ground	—	—	4·51	3·98	—	2·11	2·18	—	3·31	2·89
ton M.B.										
Hall	2·08	2·01	2·77	2·48	0·76	0·93	0·92	1·31	1·82	1·69
nham School	2·37	2·22	3·71	*—	1·06	1·65	*1·68	1·53	2·67	—
w U.D.										
ing Station	—	—	2·85	2·67	—	1·38	1·57	—	2·11	2·10
y M.B.										
Hall	1·66	1·82	2·31	2·05	0·84	1·14	1·17	1·25	1·74	1·60
r Hey Farm	2·15	1·93	2·21	2·19	1·07	1·20	1·50	1·42	1·77	1·87
n C.B.										
n Lane Day Nursery	2·39	2·17	3·41	2·86	1·01	1·37	*1·37	1·47	2·35	2·19
edge Street Day Nursery	3·74	3·40	5·00	5·20	1·63	2·44	*2·72	2·33	3·76	3·82
hulme Isolation Hospital	3·14	2·68	3·95	3·82	1·23	1·86	1·97	1·86	2·85	2·91
lands	3·59	3·21	4·34	4·71	1·55	2·37	2·64	2·24	3·40	3·69
ndra Park	2·84	2·19	3·54	3·05	1·16	1·51	1·90	1·62	2·52	2·48
ich M.B.										
's Yard	2·73	2·68	3·74	3·37	1·13	1·68	1·70	1·77	2·71	2·51
ge Works	2·98	2·48	3·78	3·63	1·30	2·26	2·27	1·77	3·02	2·96

SITE	Means								
	Winter—W_5				Summer—S_5			Year—Y_{12}	
	1951–52	1952–53	1953–54	1954–55	1952	1953	1954	1952–53	1953–54
Radcliffe M.B.									
Secondary School	—	—	4·19	4·04	—	1·88	1·96	—	3·04
Close Park	—	—	3·34	2·95	—	1·40	1·64	—	2·37
Ramsbottom U.D.									
Cemetery	—	—	—	2·28	—	—	*0·93	—	—
Cricket Ground	—	—	—	2·50	—	—	0·66	—	—
Royton U.D.									
Hanging Chadder Farm	2·58	2·66	4·23	*3·60	1·02	1·93	1·98	1·64	3·08
Royton Park	2·61	2·06	3·39	3·15	1·03	1·51	1·61	1·47	2·44
Stalybridge M.B.									
Market Ground	2·54	2·25	3·15	3·05	1·24	1·74	1·99	1·65	2·49
Oakfield	2·39	2·05	3·13	2·74	1·11	1·88	2·04	1·51	2·48
Swinton and Pendlebury M.B.									
Moorside Park	2·41	2·38	3·96	3·23	1·04	1·58	1·51	1·60	2·76
Victoria Park	2·93	2·79	4·15	3·75	1·22	1·74	1·81	1·92	2·99
Whitefield U.D.									
Cricket Ground	1·70	1·78	2·48	2·61	0·77	1·13	0·92	1·19	1·79
Sewage Works	2·22	2·01	3·33	2·69	1·04	1·49	1·62	1·43	2·37
Whitworth U.D.									
Cemetery	—	—	2·24	2·05	—	1·03	0·97	—	1·64

* Apparatus damaged or stolen.

Investigation of atmospheric pollution–meteorological data

(Winter—November/March ; Summer—May/September ; Year—April/March)

WIND DIRECTION (Percentage of total observations)

	Means									
	Winter					Summer			Year	
	1948–53	1951–52	1952–53	1953–54	1948–53	1952	1953	1954	1948–53	1952 53
N	6·2	4·9	9·6	5·6	5·2	6·5	4·2	6·0	5·5	7·9
N.E.	5·1	4·9	7·4	6·9	8·4	8·9	6·1	5·5	6·5	8·2
E.	7·2	6·9	7·2	13·3	8·1	5·1	5·8	5·5	8·0	6·1
S.E.	8·5	6·5	3·7	12·0	5·0	4·7	7·9	6·3	7·0	4·2
S.	36·3	36·8	35·0	36·5	25·7	19·7	31·1	27·6	30·7	27·0
S.W.	12·3	14·6	8·6	10·3	14·9	14·8	14·3	14·0	13·7	11·9
W.	14·6	16·4	12·2	8·6	18·7	26·5	18·9	26·0	16·8	19·7
N.W.	9·8	8·8	16·3	6·8	14·0	13·8	11·7	9·1	11·8	15·0

WIND VELOCITY (Number of observations)

	Totals									
More than 33 knots ..	2	1	6	2	1	1	0	0	2	7
22–33 knots	25	41	14	29	7	8	17	14	37	32
11–21 knots	201	231	159	243	182	197	219	252	489	451
1–10 knots	330	291	333	282	390	371	336	318	852	822
Calm	50	44	92	48	33	35	40	28	96	148
Mean Temperature of ..	40·6	41·2	39·7	41·5	57·1	56·8	58·0	55·4	48·8	48·3

FOG—NUMBER OF DAYS (morning observations)

	Totals									
Ringway	15	9	28	17	1	1	0	2	18	32
Rochdale..	41	40	60	44	2	1	6	1	50	66
Whitworth Park	36	21	64	79	2	0	18	16	41	67

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